Santa Clara Valley
Water District

41st Annual Report

FY 2012-13

Protection and Augmentation of Water Supplies

February 2012

5750 Almaden Expressway, San Jose, CA 95118-3614 | (408) 265-2600 | www.valleywater.org

Santa Clara Valley Water District

The mission of the District is to provide for a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective, and environmentally sensitive manner for current and future generations.

February 24, 2012

Dear water district stakeholder:

The Santa Clara Valley Water District has released its 41st Annual Report on the **Protection and Augmentation of Water Supplies**, which documents the water district's efforts to ensure a reliable water supply for Santa Clara County. The report presents the basis for the recommended groundwater production charges for fiscal year (FY) 2012-13 and is posted on our website, www.valleywater.org.

To provide transparent information, the report is published and filed prior to the water district holding public hearings on the groundwater production charges. Groundwater replenished by the water district makes up, on average, two-thirds of the water used by residents, businesses and municipal and retail water providers countywide.

With revenue from groundwater production charges, the water district protects and augments water supplies for the health, welfare and safety of the community. The activities, programs and services undertaken with funding from groundwater production charges is restricted to:

Water supplies
- Operate and maintain local reservoirs to capture water and fill recharge ponds
- Purchase imported water to replenish the groundwater basin

Water quality
- Monitor and protect groundwater from pollutants
- Ensure proper construction and destruction of wells to prevent contaminants from infiltrating the groundwater basin

Infrastructure
- Plan and construct improvements to dams, pipelines, ponds, treatment plants and pump stations
- Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer

The water district is proposing rate increases in its two groundwater zones for FY 2012-13 as follows:

North County Zone W-2 up to 9.3%, average household increase of $1.83 per month
South County Zone W-5 up to 3.5%, average household increase of $0.34 per month
Surface water users in North County up to 9.2%, average household increase of $1.84 per month
Surface water users in South County up to 3.5%, average household increase of $0.36 per month
Ag groundwater users in either zone up to 3.5%, or about $0.10 per month per acre
Ag surface water users in either zone up to 3.5%, or about $0.17 per month per acre

No one likes to see rates rise. In fact, the water district worked hard to keep charges flat for three years from 2008 through 2010 when many of our counterparts adopted double-digit increases. We take our role as stewards of public funds very seriously and have continued our managed approach to cost cutting to minimize the proposed increase. In fact, the water district recently negotiated reductions in employee benefits, which will save $11.4 million over the next three years. In addition, the water district must respond to the needs of an aging and complex infrastructure system. The proposed increases are a small step toward funding a capital program that will keep critical assets like dams, pipelines and pump stations performing so that water continues to flow from your tap.

I encourage you to learn more about these important groundwater issues. In addition to the information on our website at www.valleywater.org, the following opportunities are also available for you to gather information and provide input:

April 10, 2012 9:00 a.m. • Board meeting • Time certain	Public hearing (opens) Santa Clara Valley Water District 5700 Almaden Expwy., San Jose
April 12, 2012 6:00 p.m. - open house 7:00 p.m. - board meeting	Public hearing and open house Gilroy City Council Chambers 7351 Rosanna Street, Gilroy
April 24, 2012 9:00 a.m. • Board meeting • Time certain	Public hearing (closes) Santa Clara Valley Water District 5700 Almaden Expwy., San Jose

If you have questions or concerns about groundwater, this year's charge-setting process, or how we can better serve you, please join us at an upcoming open house or public hearing, or visit our website, www.valleywater.org. You may also contact us directly by phone at (408) 265-2600, or email at clerkoftheboard@valleywater.org

Sincerely,

Beau Goldie
Chief Executive Officer

Protection and Augumentation of Water Supplies

41st Annual Report

2012-2013

Sections

1 Present Water Requirements and Water Supply Availability

2 Future Water Requirements and Water Supply Availability

3 Programs to Sustain Supply Reliability

4 Financial Outlook of Water Utility System

5 Appendices

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Introduction

This is the 41st annual report on the Santa Clara Valley Water District's activities in the protection and augmentation of water supplies. This report is prepared in accordance with the requirements of the District Act, section 26.5.

Section 1
Provides information on the present water requirements and water supply availability;

Section 2
Addresses future water requirements and water supply availability;

Section 3
Discusses programs needed to sustain water supply reliability into the future;

Section 4
Provides the financial analysis of the water district's water utility system, including future capital improvement and maintenance requirements, operating requirements, financing methods and the recommended groundwater production charges by zone for fiscal year 2012-2013.

In FY 2012-13 the water district is proposing up to a 9.3 percent increase in the municipal and industrial (M&I) groundwater production charge for the North County and up to a 3.5 percent increase for South County. For M&I surface water users the water district is proposing up to a 9.2% increase for North County and up to 3.5% for South County. The water district is proposing up to an 3.5% increase for agricultural groundwater users and up to 3.5% for agricultural surface water users in either zone. These increases are necessary for critical capital program needs, including dam seismic retrofits.

No one likes to see rates rise. We take our role as stewards of public funds very seriously and worked hard to keep charges flat for three years from 2008 through 2010 when many of our counterparts adopted double-digit increases. These proposed increases come after the district has reduced 92 jobs, reduced overtime by 51 percent, and reduced employee benefits.

In 2011, much of the groundwater pumped countywide, came from water imported from the Sierra Nevada Mountains through the Sacramento-San Joaquin River Delta.

The water district imports this water and then uses it in part to replenish the groundwater basins for a reliable water supply. In addition, roughly 110,000 acre-feet of water used by households and businesses throughout the northern part of the county is treated and disinfected at the water district's treatment plants. Providing treated water supplements and helps preserve groundwater. Without the water district's actions to augment local supplies and replenish and preserve the groundwater aquifer, groundwater levels would decline, wells would run dry and permanent land subsidence (sinking of the ground) would occur again.

What do Groundwater Production Charges pay for?

What you get

Benefits

- Reliable, healthy and clean drinking water
- Diverse water supply sources
- Protected and sustained water resources
- Maximized water conservation and recycling

What we do

Replenish the groundwater basin

- Operate and maintain local reservoirs to capture water and fill recharge ponds.
- Purchase imported water.

Ensure safe drinking water

- Monitor and protect groundwater from pollutants.
- Ensure proper construction and destruction of wells.

Construct, maintain and repair

- Plan and construct improvements to infrastructure such as dams, pipelines, ponds, treatment plants and pump stations.
- Operate and maintain pipelines and pumping plants to help sustain the groundwater aquifer.

Local water

A complex network of reservoirs, creeks and specialized ponds replenishes the groundwater basin. The same system is also used to transport imported water so that it, too, can be used to replenish the aquifer. It all works so well that "managed" recharge actually exceeds natural recharge. Water pumped from the groundwater basin through wells is used by private well owners, farmers and water retailers. Some water captured in reservoirs is processed at state-of-the art drinking water treatment plants. The treated water is sold to local water retailers, such as San Jose Water Company, who use their own distribution systems to serve customers.

Imported water

Much of the county's current water supply comes from hundreds of miles away, first as snow or rain in the Sierra Nevada range of northern and eastern California, then as water in rivers that flow toward the Sacramento-San Joaquin River Delta. This "imported water" is brought into the county through the complex infrastructure of the State Water Project, the federal Central Valley Project and San Francisco's Hetch Hetchy system. Three drinking water treatment plants deliver imported water to customers, while the rest is used to replenish groundwater basins. Having treated imported water available to meet demands protects the groundwater basin from over pumping.

Recycled water

An important and growing source of water is recycled water. Used primarily for irrigation by industry and agriculture, recycled water is wastewater that has been purified to meet strict standards set by the California Department of Health Services. Using recycled water helps conserve drinking water supplies, provides a dependable, drought-proof, locally-controlled water supply, reduces dependency on imported water and groundwater and helps preserve our saltwater and tidal habitat by reducing freshwater discharge to the bay.

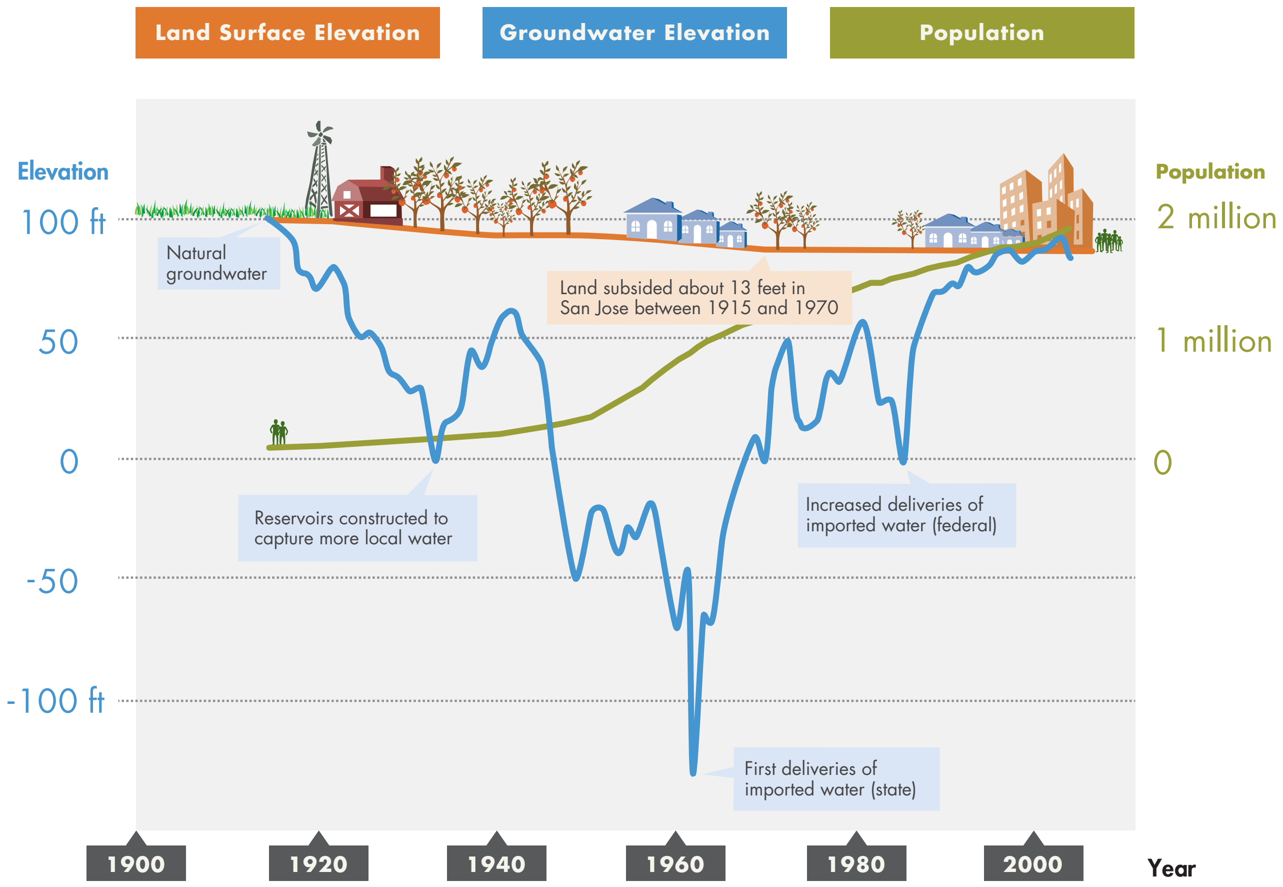
More than 20 years of water planning

More than 20 years of water planning since the last extended drought, the water district has invested in a diverse water portfolio as a strategy to buffer impacts from shortages, maintain water in the groundwater aquifer and provide a reliable supply.

These investments lessen the magnitude of critical shortages in supplies due to hydrologic conditions and regulatory actions.

SANTA CLARA COUNTY GROUNDWATER AT-A-GLANCE

a graphic representation not intended as a technical exhibit



Natural groundwater

Land subsided about 13 feet in San Jose between 1915 and 1970

Reservoirs constructed to capture more local water

Increased deliveries of imported water (federal)

First deliveries of imported water (state)

Over the years, the water district's water importation and groundwater management activities have stabilized groundwater levels and prevented land subsidence, or sinking.

Estimated 2011 total county water supply

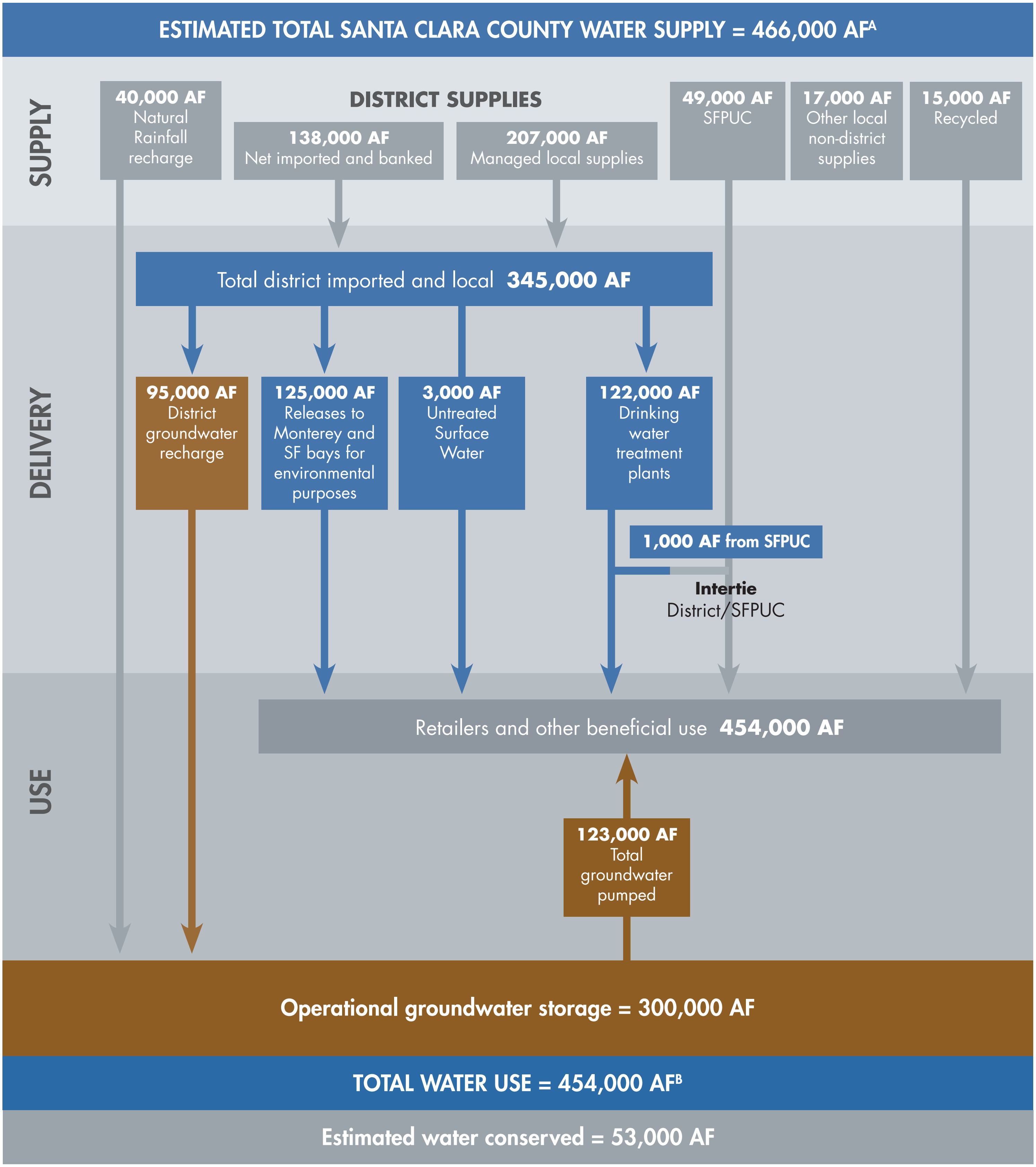
The chart at right shows calendar year 2011 estimated total water supply for Santa Clara County.
Water from our 10 local reservoirs and water imported from the federal Central Valley Project and State Water Project is:

- Used to replenish local groundwater basins, which are pumped for use by individual well owners, municipal and retail water providers
- Sent to the district's three drinking water treatment plants for purification
- Supplied directly to water retailers
- Released to meet environmental needs and regulations

Non-district supplies in the county include rainfall recharge; water from San Francisco's Hetch Hetchy system; and private water rights. Note: stored groundwater is not included in the overall supply figure. For more detail on sources of supply, see Chapter 1.

Acre-foot: About 326,000 gallons, the amount used by two families of five over one year.

Calendar Year 2011



ESTIMATED TOTAL SANTA CLARA COUNTY WATER SUPPLY = 466,000 AF[A]

SUPPLY

40,000 AF Natural Rainfall recharge

DISTRICT SUPPLIES

138,000 AF Net imported and banked

207,000 AF Managed local supplies

49,000 AF SFPUC

17,000 AF Other local non-district supplies

15,000 AF Recycled

DELIVERY

Total district imported and local **345,000 AF**

95,000 AF District groundwater recharge

125,000 AF Releases to Monterey and SF bays for environmental purposes

3,000 AF Untreated Surface Water

122,000 AF Drinking water treatment plants

1,000 AF from SFPUC

Intertie District/SFPUC

USE

Retailers and other beneficial use **454,000 AF**

123,000 AF Total groundwater pumped

Operational groundwater storage = 300,000 AF

TOTAL WATER USE = 454,000 AF[B]

Estimated water conserved = 53,000 AF

[A] Includes net district and non-district surface water supplies and estimated rainfall recharge to groundwater basins.
[B] Includes municipal, industrial, agricultural and environmental uses.

WATER RATES

		Dollars Per Acre Foot		
	Basic User/Groundwater Production Charge	**FY 2010-11**	**FY 2011-12**	**Recommended FY 2012-13**
Zone W-2 (North County)	Municipal and Industrial	520.00	569.00	622.00
	Agricultural	16.50	17.10	17.70
	Surface Water Charge			
	Surface Water Master Charge	11.75	12.17	12.60
	Total Surface Water, Municipal and Industrial*	531.75	581.17	634.60
	Total Surface Water, Agricultural*	28.25	29.27	30.30
	Treated Water Charges			
	Contract Surcharge	100.00	100.00	100.00
	Total Treated Water Contract Charge**	620.00	669.00	722.00
	Non-Contract Surcharge	50.00	50.00	50.00
	Total Treated Water Non-Contract Charge***	570.00	619.00	672.00

	Basic User/Groundwater Production Charge	**FY 2010-11**	**FY 2011-12**	**Recommended FY 2012-13**
Zone W-5 (South County)	Municipal and Industrial	275.00	285.00	295.00
	Agricultural	16.50	17.10	17.70
	Surface Water Charge			
	Surface Water Master Charge	11.75	12.17	12.60
	Total Surface Water, Municipal and Industrial*	286.75	297.17	307.60
	Total Surface Water, Agricultural*	28.25	29.27	30.30
	Recycled Water Charges			
	Municipal and Industrial	275.00	275.00	275.00
	Agricultural	41.50	41.50	41.50

*Note: The total surface water charge is the sum of the basic user charge (which equals the groundwater production charge) plus the water master charge.

**Note: The total treated water contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the non-contract surcharge.

***Note: The total treated water non-contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the non-contract surcharge.

The Water District is proposing groundwater production charge increases of up to 9.3 percent for North County well owners, and up to 3.5 percent for South County. For surface water users, the water district is proposing increases up to 9.2 percent for North County municipal and industrial water users, up to 3.5 percent for South County municipal and industrial water users, and up to 3.5 percent for agricultural water users. The increases are necessary to cover operating expenses and fund critical capital program needs, including dam seismic retrofits. We have continued our managed approach to cost cutting including reductions to employee benefits and eliminating a cost of living increase for next year. Even so, an increase in rates is necessary to help ensure adequate water supply to Santa Clara County. The recommended charges are shown in the right-hand column of the chart above.

2012 PAWS REPORT

Present Water Requirements and Water Supply Availability

1-1 WATER SUPPLY OVERVIEW

The mission of the Santa Clara Valley Water District (water district) is a healthy, safe, and enhanced quality of living in Santa Clara County through watershed stewardship and comprehensive management of water resources in a practical, cost-effective, and environmentally-sensitive manner for current and future generations. Accordingly, staff employs an integrated approach to manage a sustainable water supply through conjunctive use of surface and ground water resources and maximizing water use efficiency.

Water supply is comprised of "incoming" supplies from local and imported sources, as well as previously-stored supplies withdrawn from in-county and/or out-of-county surface water and groundwater storage.

Local Supplies

Local groundwater resources make up the foundation of water supply in Santa Clara County, but they need to be augmented by the water district's comprehensive water supply management activities in order to reliably meet the needs of county residents, businesses, agriculture and the environment. These activities include direct and in-lieu groundwater recharge through the provision of treated surface water, acquisition of supplemental water supplies, and programs to protect, manage and sustain water resources.

The bulk of the local water supplies originate from runoff from precipitation, captured in local reservoirs and released for groundwater recharge and for treatment at the treatment plants. Some of the precipitation infiltrates and recharges the groundwater basins, although this natural recharge is insufficient to replenish groundwater extracted from the basins.

An additional local water supply is highly-treated recycled water used for non-potable purposes. Use of recycled water offsets demand for potable water and serves as in-lieu recharge.

Imported Supplies

The water district's imported sources of supply originate from natural runoff and releases from statewide reservoirs and pumped out of the Sacramento-San Joaquin Delta by the State Water Project (SWP) and federal Central Valley Project (CVP). The annual allocations of contracted supplies from the SWP and CVP are subject to cutbacks due to dry hydrologic conditions and to Delta pumping restrictions. The water district may also hedge against shortages by taking deliveries of available temporary flood flows from the Delta early in the year, before imported water contract allocations and local hydrology are known. Another remedy for shortages is through the purchase of transfer water or exchanges. Most of the imported water delivered by the SWP and CVP is sent to the water district's three water treatment plants and to supplement groundwater recharge. The treated water is sold to eight of the 13 water retailers located within Santa Clara County to offset groundwater pumping.

Additionally, eight water retailers purchase water from the City and County of San Francisco that originates from the Tuolumne River watershed and watersheds in the Bay Area. Without these supplemental supplies, groundwater pumping would exceed sustainable groundwater extraction levels.

Conjunctive Use Management

Although the groundwater basins are the water district's largest water storage facility, the limiting factor of providing a reliable water supply in drought periods is the overall capacity and capability to operate a conjunctive use system of surface and ground water supplies. Most of the local reservoirs were sized for annual operations, storing water in winter for release to groundwater recharge in summer and fall. The exception is the Anderson-Coyote reservoir system, which provides valuable carryover of supplies from year to year and can serve as a backup supply source to the water district's water treatment plants when imported water deliveries are curtailed. However, dam safety operating restrictions placed recently on Anderson, Coyote, Almaden, Calero and Guadalupe reservoirs have resulted in loss of about a third of the total surface storage capacity (as shown in Table 1-1.1) as well as significant loss of water supply yield.

Table 1-1.1 Original and Restricted Capacities of Major Water District Reservoirs

Reservoir	Year Built	Reservoir Capacity (acre-feet)	Restricted Capacity (acre-feet)	Use
Almaden*	1935	1,586	1,260	Recharge & treated
Anderson*	1950	90,373	61,810	Recharge & treated
Calero*	1935	9,934	4,585	Recharge & treated
Chesbro	1955	7,945	7,945	Recharge
Coyote*	1936	23,244	12,382	Recharge & treated
Guadalupe*	1935	3,415	2,218	Recharge
Lexington	1952	19,044	19,044	Recharge
Stevens Creek	1935	3,138	3,138	Recharge
Uvas	1957	9,835	9,835	Recharge
Vasona	1935	495	495	Recharge
Total		**169,009**	**122,712**	

* Reservoirs with dam safety operating restrictions

As part of its annual operations planning, the water district routinely opts to carry over a portion of its imported water supplies from one contract year to the next. Even though the amount is often limited by state or federal project operations, it provides cost-effective insurance against a subsequent dry year. Additionally, the water district has invested in a water banking program at the Semitropic Water Storage District which provides 350,000 acre-feet of out-of-county water storage capacity. Together with water transfers and exchanges, this additional storage helps the water district manage uncertainty and variability in supply as each water year develops.

Managing a complex system of surface water and groundwater resources is further complicated by hydrologic uncertainties, regulatory restrictions and aging infrastructure, as discussed in the following sections and chapters of this report.

1-2 PRESENT WATER SUPPLY CONDITIONS

Calendar year 2011 was wet, with a near-record snowpack and heavy rains: however pumping restrictions in the Delta due to ongoing fishery concerns resulted in less water deliveries than expected under such wet conditions, resulting in a final State Water project allocation of 80 percent. The final CVP allocations were 80 percent for south-of-delta agricultural (AG) purposes; the corresponding municipal and industrial (M&I) allocation for the District was 80 percent. Because of the pumping limitations in the Delta, water was backed up into statewide storage reservoirs, resulting in storage levels that remained high into the fall and winter of 2011. Table 1-2.1 summarizes the year types and final allocations from the SWP and CVP for the last four water years[1].

Table 1-2.1 Statewide Water Year Types and Final Imported Water Allocations

Water Year[1]	Year Type		Final allocations to the water district as % of contract amounts		
	Sacramento River	San Joaquin River	SWP	CVP	
				M&I	AG
2006–07	dry	critical	60%	75%	50%
2007–08	critical	critical	35%	75%	40%
2008–09	dry	below normal	40%	60%	10%
2009-10	below normal	above normal	50%	75%	45%
2010-11	Wet	Wet	80%	80%	80%

Locally, rainfall for the 2010–11 season[2] at downtown San Jose was at 103 percent of average[3]. Combined storage at water district reservoirs at the end of the 2010–11 water year was at 111 percent of capacity.

The 2011–12 water year began with a dry fall, typical with the presence of La Niña ocean conditions which often result in drier conditions for the southwest region of the country. Statewide precipitation and snow water equivalent by December

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[1] Water year is the twelve month period between October 1 and September 30.

[2] Rainfall season or year is the twelve month period between July 1 and June 30, same as fiscal year.

[3] Rainfall at San Jose (station 86) was approximately 14.5 inches or 73 percent of average for calendar year 2011.

31, 2011 were at 50 percent and 20 percent of seasonal average to date, respectively. Runoff and storage at key reservoirs were at 40 and 115 percent of seasonal average, respectively. January 2012 was very dry, however. With a few more months to go in the rainy season, it is unclear what type of water year 2011–12 will turn out to be.

Local rainfall as of January 31, 2012 ranges from 27 percent of seasonal average to date in San Jose to 57 percent in the Coyote watershed. Total storage at water district reservoirs as of January 31, 2012 was 43 percent of capacity. However, because of storage restrictions in place for half of the water district reservoirs, the combined storage was at 60 percent of the reduced capacity. Total storage at water district reservoirs was 74 percent of 20 year average.

While reservoirs are a visible indicator of our local water supply, the majority of our local reserves lie hidden beneath our feet in the groundwater aquifers. Because the groundwater basins can store two times more water than all of the local surface water reservoirs combined, the water district strives to maintain adequate storage in the groundwater basins in wet and average years to get through extended dry periods like the three dry years of 2007-2009. The water district's water management programs, including the mandatory 15 percent conservation target imposed in 2009 and extended to 2010, compounded with the economic recession and a wet spring, resulted in huge water use reductions in 2010.

Groundwater elevations at three index wells (see locator map in Figure 1-2.1), as indicators of groundwater trends and conditions, are shown in Figures 1-2.2 through 1-2.4. Overall groundwater conditions are healthy, with an increase in groundwater storage levels compared to 2010, as shown in Table 1-2.2.

Figure 1-2.1 Map of Index Well Locations

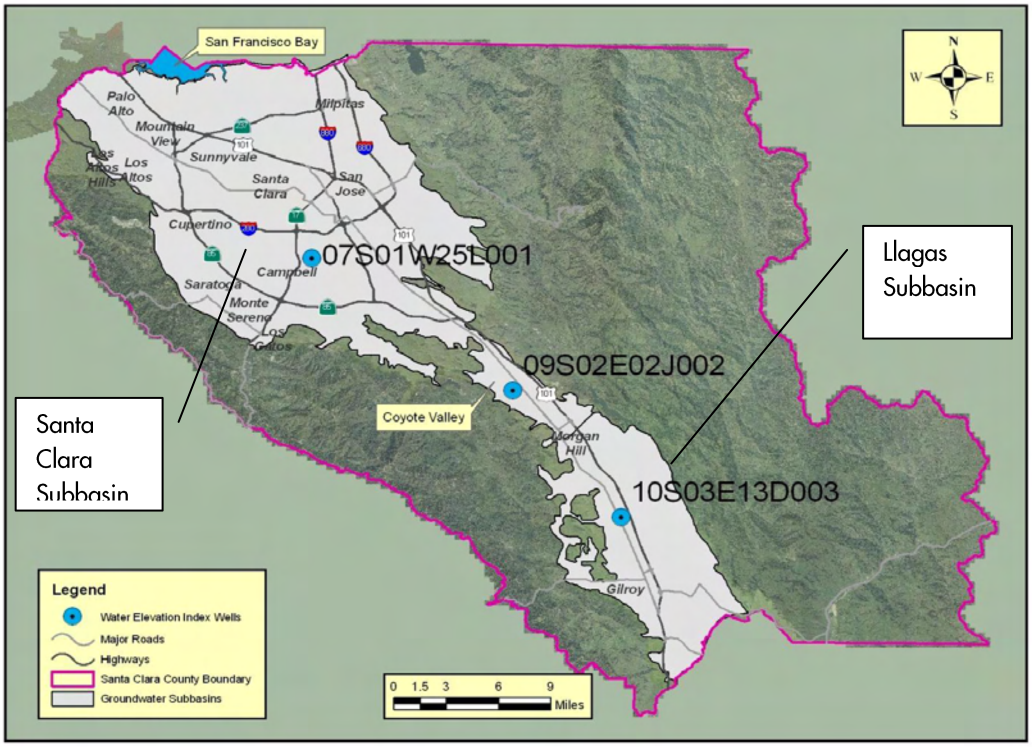


Figure 1-2.2 Historical Santa Clara Subbasin Groundwater Elevations, Index Well 07S01W25L001.

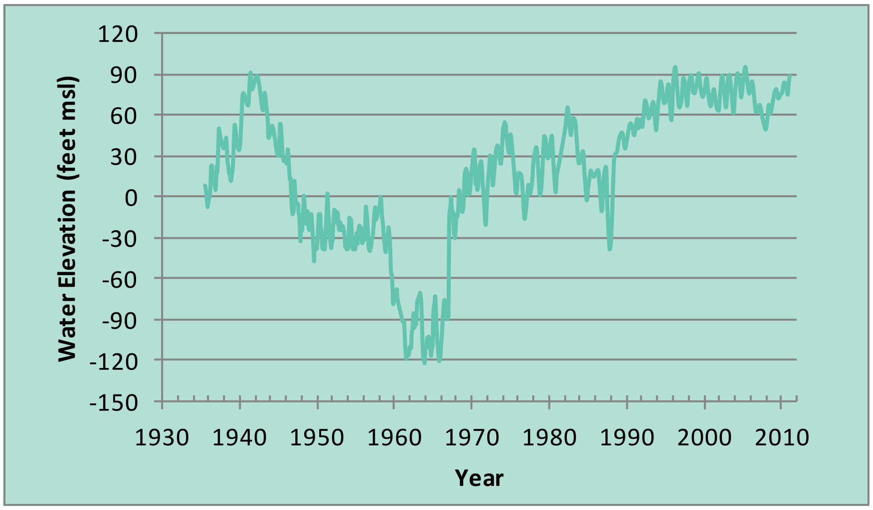


Figure 1-2.3 Historical Coyote Valley Groundwater Elevations, Index Well 09S02E02J002

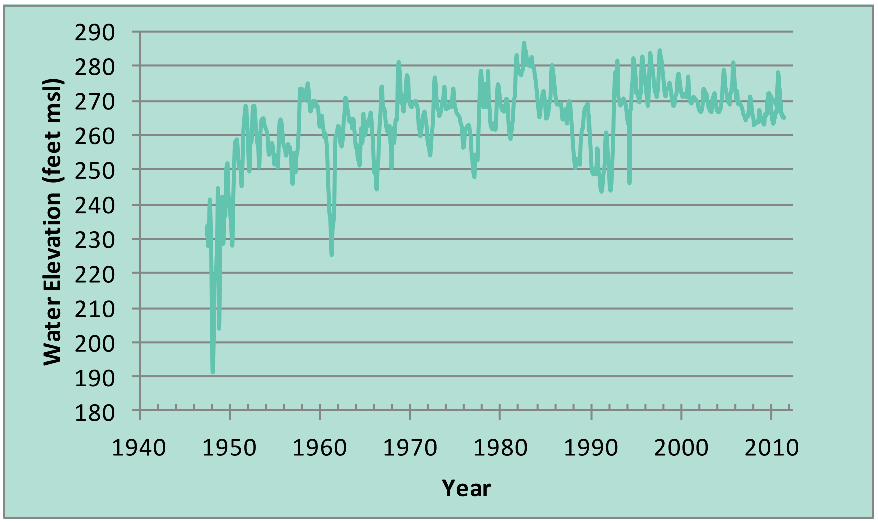


Figure 1-2.4 Historical Llagas Subbasin Groundwater Elevations, Index Well 10S03E13D003

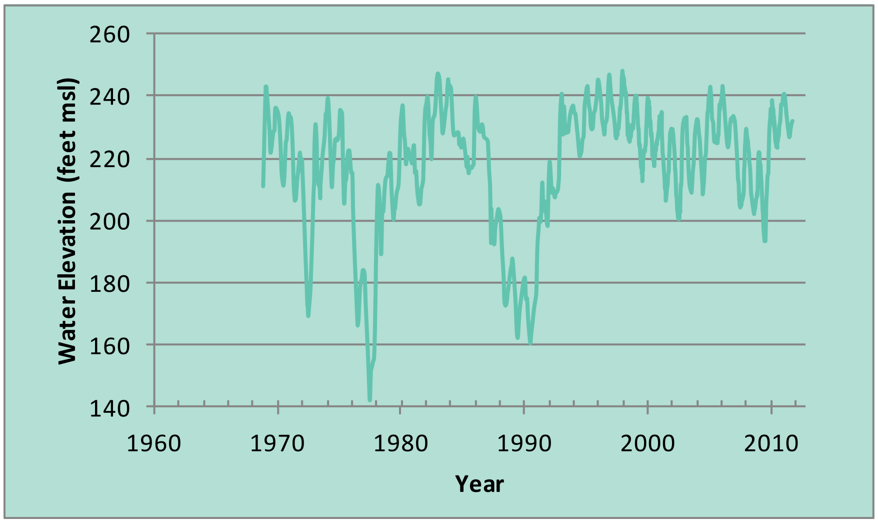


Table 1-2.2 End-of-Year Groundwater Storage and Change in Storage

	December Groundwater Storage, AF (acre feet)		Change in Storage, AF
	2010	2011	
Santa Clara Plain (Santa Clara Subbasin)	253,300	262,000	8,700
Coyote Valley (Santa Clara Subbasin)	4,200	4,600	400
Llagas Subbasin	31,800	32,800	1,000
Total	**289,300**	**299,400**	**10,100**

1-3 PRESENT WATER USE AND WATER REQUIREMENTS

On February 27, 2009, Governor Schwarzenegger proclaimed a statewide drought emergency and requested that all urban water users reduce their individual water use by 20 percent. In March 2009, the water district Board of Directors adopted Resolution 09-25 calling for 15 percent mandatory conservation in response to a third consecutive dry year, court ordered pumping restrictions in the Delta, operational uncertainty and declining local reserves. In July 2010, the water district board adopted Resolution 10-60 which extended the call for mandatory water conservation for three months and decreased the quantity of water use reduction from fifteen percent to ten percent. In September 2010, the water district board adopted Resolution 10-76 calling for ten percent voluntary water conservation through June 2011.

The community responded well to the water district board's call for conservation and exceeded the goal by reducing water use by 19 percent for the time period of March 2009 through June of 2011. The savings are relative to the corresponding months of calendar year 2004 water use and are normalized for population growth. The steep reduction in water use was probably a result of the combined effects of a lingering economic recession, a wet spring in 2010 and 2011, and success of the water district's water conservation outreach and coordination efforts with cities, the retailers and the media.

Table 1-3.1 shows unadjusted historical water use in Santa Clara County and Table 1-3.2 shows a breakdown of groundwater production and managed recharge by water charge zone. Table 1-3.3 shows a historical summary of surface water supply, use and distribution for the last three years.

Table 1-3.1 Historical Water Use in Santa Clara County for Calendar Years 2009-2011

Historical Calendar Year Water Use	In Acre-feet		
	Actual 2009	Preliminary 2010	Estimated 2011*
Groundwater	155,120	136,740	123,500
Treated Water	110,900	108,200	122,300
Raw Surface Water Deliveries	2,970	3,080	2,800
SFPUC Supplies to Local Retailers[1]	55,380	49,690	49,500
SJWC and Stanford Water Rights[2]	12,040	16,850	16,600
Recycled Water	15,280	14,720	15,000
Total Water Used in Santa Clara Co.	351,690	329,280	329,700

[1] *San Francisco Public Utilities Commission supplies to 8 retailers and NASA-AMES*

[2] *San Jose Water Company*

* *Estimated 2011 rounded to the nearest hundred*

Table 1-3.2 Groundwater Production and Managed Recharge by Water Charge Zone

Charge Zone	Zone W-2					Zone W-5				
	Groundwater Production, acre-feet			Managed Recharge		Groundwater Production, acre-feet			Managed Recharge	
Year	Agricultural	Non Agricultural	Zone Total	Zone Total Recharge, acre-feet	Managed Recharge as % Production	Agricultural	Non-Agricultural	Zone Total	Zone Total Recharge, acre-feet	Managed Recharge as % Production
1997	1,910	118,550	120,460	78,040	65%	32,746	21,710	54,456	32,120	59%
1998	1,101	99,210	100,310	66,670	66%	25,861	20,009	45,870	26,130	57%
1999	1,087	106,403	107,490	80,900	75%	29,144	23,767	52,910	26,500	50%
2000	972	112,399	113,371	88,400	78%	26,920	24,537	51,457	30,200	59%
2001	752	114,606	115,358	84,620	73%	28,510	25,437	53,947	32,040	59%
2002	707	103,952	104,659	71,660	68%	27,537	23,787	51,324	35,300	69%
2003	447	96,208	96,656	74,200	77%	25,964	24,256	50,220	35,000	70%
2004	579	105,137	105,716	66,700	63%	27,634	25,533	53,167	31,000	58%
2005	826	86,640	87,467	69,200	79%	25,458	25,237	50,695	32,500	64%
2006	429	82,195	82,624	65,770	80%	24,420	28,616	53,036	30,440	57%
2007	1,087	108,748	109,835	58,000	53%	27,660	31,424	59,084	33,410	57%
2008	1,074	106,579	107,653	51,290	48%	28,183	33,520	61,703	36,100	59%
2009	608	97,242	97,850	63,000	64%	24,874	32,400	57,274	39,100	68%
Prelim. 2010	437	84,277	84,714	61,740	73%	22,616	29,459	52,075	42,320	81%
Estim. 2011	410	70,950	71,360	56,100	79%	22,620	29,460	52,080	38,630	74%

Table 1-3.3 Historical Surface Water Supply, Use and Distribution for Three Previous Calendar Years

	Calendar Year, in Acre Feet		
	Actual 2009	Preliminary 2010	Estimated 2011
District Supplies			
Local Surface Water			
Inflow (net, minus evap)	71,520	137,140	190,750
Releases from(+) or additions to(-) surface water storage	5,040	-20,550	15,820
Imported Water			
Prior year carryover	30,980	47,930	23,640
Delta flood flows	0	0	1,250
State Water Project contract allocation	40,000	50,000	80,000
San Felipe Division contract allocation	81,310	112,400	123,980
Semitropic water bank withdrawals	33,450	0	0
Water transfers and exchanges	19,320	14,300	5,000
From water transfers and exchanges			
returned to District from SFPUC via intertie	320	430	3,900
Total District Supplies:	**281,940**	**341,650**	**444,340**
Distribution of District Supplies			
To groundwater recharge			
Santa Clara Subbasin	63,000	61,740	56,100
Coyote Subbasin	15,530	12,730	9,660
Llagas Subbasin	23,570	29,590	29,440
To treated water	110,900	108,200	122,320
To surface water irrigation	2,970	3,080	2,800
To environment	18,000	30,650	124,890
To Semitropic water bank	0	51,990	66,480
To imported water carryover			
Used by District	47,930	33,810	19,970
Returned to SWP/CVP	0	0	0
To water transfers and exchanges		8,890	10,000
returned to SFPUC via intertie	40	970	2680
Total Distribution of District Supplies:	**281,940**	**341,650**	**444,340**
Other Supplies			
San Jose Water Co. & Stanford water rights	12,040	16,850	16,580
Recycled water (including District)	15,280	14,720	15,000
SFPUC deliveries to retailers	55,380	49,690	49,480
Total Other Surface Water Supplies	**82,700**	**81,260**	**81,060**
Total Managed Supplies:	**364,640**	**422,910**	**525,400**
Note: Numbers rounded to the nearest 10AF.			

2-1 OVERVIEW

As the water management agency and principal water wholesaler for Santa Clara County, the Santa Clara Valley Water District (water district) is responsible for planning (in collaboration with San Francisco Public Utilities Commission [SFPUC] and local retailers) the water supply of the county to meet current and future demand.

Water supply reliability includes the availability of the water itself as well as the reliability and integrity of the infrastructure and systems that capture, store, transport, treat and distribute it. The water district strives to meet water demand under all hydrologic conditions, including satisfying its treated water contracts for deliveries to the retail water suppliers. As the groundwater manager for the county, the water district's goal is to ensure that an adequate groundwater reserve is available for the future.

Since water supplies available to the county are obtained from both local and imported sources, the water district's water supply is a function of the amount of precipitation that falls both locally and in the watersheds of Northern California. The supply available is also a function of the facilities in place to manage the supply. Sources of water supply in northern Santa Clara County (North County) consist of locally developed and managed water, recycled water, water imported by the water district via the State Water Project (SWP) and the federal Central Valley Project (CVP), and supplies to some of the retail water suppliers from the City and County of San Francisco's regional water system (Hetch Hetchy and Bay Area watersheds). Southern Santa Clara County (South County including Coyote Valley and Llagas Subbasin) is supplied by locally developed and managed water, recycled water, and CVP water.

2-2 PROJECTED FUTURE WATER SUPPLY AVAILABILITY AND DEMAND

Near Term Water Supply Availability

Water district staff begins preparing the water district's Annual Water Supply Operations and Contingency Strategy for the upcoming calendar year in the fall of each year. The strategy is composed of several operations and water supply management scenarios that account for the probable range of water supply conditions that the water district can expect in the upcoming year. These variable conditions include precipitation, both locally and in the Sierra, as well as imported supplies. Local precipitation and runoff impact our local reservoir storage, stream flow, and natural recharge of the groundwater basins. The quantity of precipitation in the Sierra and the timing of snowmelt impact the water district's imported water supplies that are conveyed through the Sacramento-San Joaquin Delta. Other factors that impact the water district's water supply include: infrastructure and facility limitations; planned and unplanned facilities outages; contractual obligations; the ability to bring in banked water district supplies from Semitropic Water Storage District; and regulatory, institutional and legal constraints.

As described in section 1 of the report, water year 2011–12 started with a very dry fall. The Climate Prediction Center has identified weak to moderate La Niña conditions this winter that are likely to persist into this spring. La Niña episodes have a tendency to influence large scale weather patterns that usually result in wetter and stormier than average conditions in the northern regions of the United States, and warmer and less stormy weather across the Southern portions of the U.S. The influence of La Niña episodes on a more localized level such as central California is not as clearly indicated. The Northern Sierra 8-Station Precipitation Index total from the beginning of October through the end of December of 2011 was 6.9 inches, which is about 39 percent of the seasonal average to date and 14 percent of an average water year. In January 2012, conditions improved slightly, and by February 1, 2012, the precipitation accumulation total was 14.5 inches or 54 percent of the seasonal average and 29 percent of an average water year. Early February has also started out with below average, but it is difficult to predict how the rest of the season will turn out.

Because of the high carryover in the state's large reservoirs, the Department of Water Resources (DWR) announced on November 18, 2011 its initial 2012 allocation of 60 percent of contract amounts for the SWP supply. The Bureau of Reclamation (USBR) is expected to announce an initial allocation for CVP in February 2012. The initial allocations are subject to change as the water year progresses.

Local surface water supplies have been reduced because of the loss in water district reservoir storage capacity due to regulatory restrictions to address seismic concerns. Water levels at Anderson Reservoir, the largest water district-owned surface reservoir, have been kept low, resulting in loss of about 30 percent of its original storage capacity.

Table 2-2.1 reflects the probable range of local and imported surface water supplies the water district currently expects in calendar year 2012. In conjunction with surface water supplies, groundwater reserves are managed to supplement available supplies during dry periods and to ensure that there are adequate supplies to meet current and future demand. The strategy will be continuously updated throughout the year to account for operations to-date and real-time conditions.

Table 2-2.1 Projected Calendar Year 2012 - Range of Surface Water Supply

Projected Calendar Year 2012 Supply in Acre-Feet Based on 1/12/12 Forecast		
	Average Year	Dry Year
Imported Water	177,000 - 193,000	164,000 – 174,000
Local Surface Water	48,000	13,000
Total	**225,000 - 241,000**	**177,000 – 187,000**

Long-Term Projected Demand and Water Supply

The Association of Bay Area Governments (ABAG) projected in 2009 that the population of the county will increase to 2,431,300 by the year 2035 compared to the beginning of year 2010 population of 1,880,900. An increasing population and job growth in the area will increase demand for water. Overall, countywide water demand is projected to increase by about 90,000 acre-feet or by more than 25 percent over the next 25 years, compared to year 2010 water use, taking into account implementation of planned water conservation programs. The reduction in water use for the period between the years 2007 and 2011 is likely the result of the combined effects of a lingering economic recession and success of the District's water conservation outreach and coordination efforts with cities, the retailers and the media. The demand projections presented here presume that water use will return to trend by the year 2015 as the slow economic recovery gains traction. The identified increase in demand will need to be met through a combination of new supply development and additional demand reduction measures, to be identified in the current master planning effort.

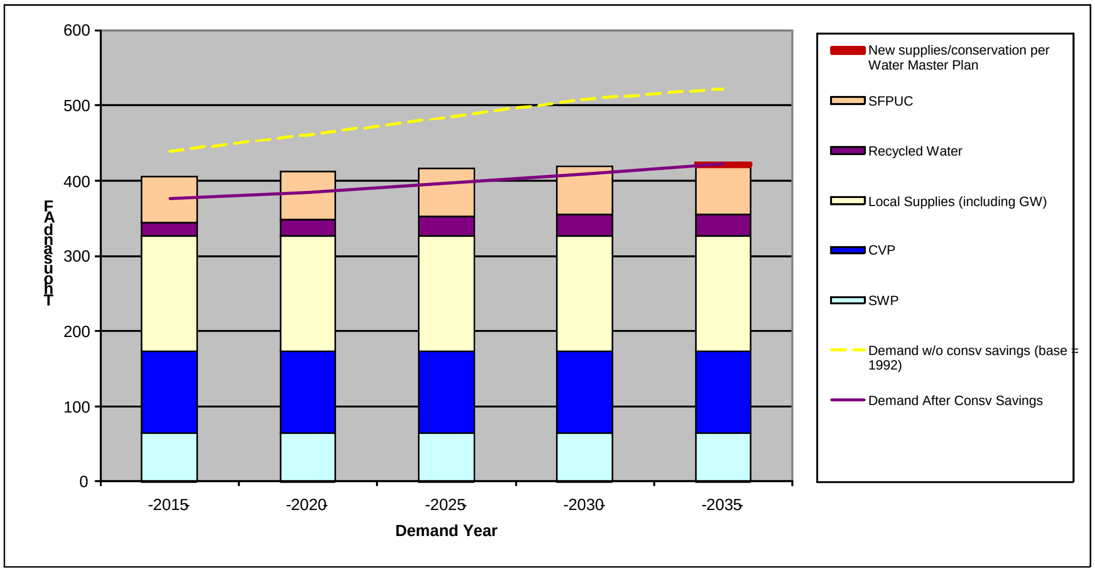
The water district and most major retail water providers partner in regional implementation of a variety of water use efficiency programs to permanently reduce water use in the county. As shown in Figure 2-2.1, the year 2035 demand with currently planned conservation programs in place is projected to be approximately 423,000 acre-feet.

The long-term savings goal in the water district board-adopted 2010 UWMP is 98,500 acre-feet per year in water savings by 2030. Additionally, recent legislation (The Water Conservation Act of 2009) requires all retail water agencies in the state to reduce per capita water use 20 percent by 2020. To achieve these aggressive long-term goals, the water district implements nearly 20 different ongoing water conservation programs that use a mix of incentives and rebates, free device installation, one-on-one home visits, site surveys, and educational outreach to reduce water consumption in homes, businesses and agriculture. These programs are designed to achieve sustainable, long-term water savings and are implemented regardless of water supply conditions.

Through June 2011, the water district has achieved 50,500 acre-feet/year of conservation savings to stay on pace to reach its long-term goal of 98,500 acre-feet per year by 2030. Additionally, if the water district remains on pace to meet this long-term goal, the region as a whole should meet the state's goal of 20 percent reduction in per capita water use by 2020. Due to the current economic climate, reductions have been made to the conservation budget in FY 2011–12 and more are expected in FY 2012–13. These reductions may cause the water district to fall off pace from meeting the long-term goals, although it can be made up in future years through redoubled efforts. In addition, approximately 29,200 acre-feet of the year 2030 demand will be supplied by recycled water.

Imported water deliveries from the SWP and federal CVP have been negatively impacted by significant restrictions on Delta pumping required by the biological opinions issued by the U.S. Fish and Wildlife Service (FWS - December 2008) and National Marine Fisheries Service (NMFS -June 2009), as well as altered hydrologic conditions due to climate change.

Figure 2-2.1 Normal Year Supply & Demand Comparison, Santa Clara County (Preliminary)



Notes:

(1) SWP and CVP supplies based on State Water Project Delivery Reliability Report 2009 and associated CALSIM II Modeling Results under 2029 demand conditions with climate change.

(2) Assumes no additional imported supplies are secured through transfer, spot market or options.

(3) Includes Department of Safety of Dams interim reservoir operations restrictions for Almaden, Anderson, Calero, Coyote and Guadalupe. Assumes repairs to Anderson will be completed and reservoir may be operated at full capacity starting in 2025.

(4) Recycled water projections based on estimates provided by county recycled water producers and retailers. See Chapter 7 of UWMP for more information.

(5) SFPUC supplies based on Interim Supply Allocations adopted by SFPUC in December 2010.

(6) Demands after conservation savings are based on projections from water retailers and include water conservation program water savings goal for both urban and agricultural conservation. See Chapter 4 and Chapter 5 for more information on demand projections and the water conservation program, respectively.

In the 2009 SWP delivery reliability report, issued in August 2010, there are greater reductions in water deliveries on average when compared to previous reports issued in 2005 and 2007. The average annual SWP delivery is at 60 percent for current and projected future conditions. Over multiple-year dry periods, the average annual SWP delivery is around 35 percent. In addition to the impact of reduced annual supplies, the water district could sustain cumulative impacts from reduced supplies in the average and wetter years than historically were available for the water district to store either locally or out-of-county as reserves for the drier years. These updated imported water delivery estimates were incorporated into the 2010 Urban Water Management Plan (UWMP). The water supplies and demands depicted in Figure 2-2.1 reflect assumptions currently utilized in the board-adopted 2010 UWMP including imported water allocations based on the 2009 SWP delivery reliability report.

The "normal" year for the purposes of the 2010 UWMP is a year in the historical sequence (1922 – 2003) that most closely represents median runoff levels and patterns. Note that the historical sequence utilized for the water district's 2005 UWMP was limited to 1967 through 1994, a period with lower average annual supplies compared to the 1922 – 2003 time period. The normal year analysis uses a specific year to approximate supplies available on an annual basis excluding carryover storage to identify the normal year shortage, if any. Note that groundwater is used in all year types (including years where the total supplies exceed total demands) for distribution, storage and treatment. Year 2002 was selected as the "normal year" since it is close to the median, essentially equal to the average and falls within the period after 1967 where actual rather than correlated data is available. The selection of a "normal year" does not match the average year for all supply sources, but is the "best fit" for the hydrologic years included in the modeling analysis.

The results shown in Figure 2-2.1 indicate that annual supplies begin to fall below projected demands under normal year conditions between the years 2030 and 2035. The model shows that carryover supplies between the years 2020 and 2025 begin to be depleted, requiring increased calls for water shortage contingency actions such as short term behavioral water use reduction. These calls would increase in magnitude and frequency with time, unless a combination of new supplies and infrastructure, increased long term conservation, and changes in operational strategies were implemented. Shortfalls are identified for the water district as a whole. The analysis performed for the UWMP does not identify shortfalls in specific areas.

Multiple dry year scenario analysis is useful particularly in the evaluation of carryover storage. Evaluating the availability of the water supplies in Santa Clara County requires an understanding of the driest periods that can reasonably be expected to occur. Over the more than 120 years of recorded rainfall, seven major drought events have occurred. In dry and multiple dry years analysis, the use of groundwater reserves and the indicated shortage is highly dependent on the assumed initial groundwater storage at the beginning of the run and leading into the dry year period under analysis and the hydrologic sequence used in the model.

Water district modeling results also indicate that the water supply system in the county is more vulnerable to successive dry years, such as those that occurred in 1928-1934 and 1987-1992. Multiple dry year periods deplete water storage reserves in local and imported supply reservoirs and in the groundwater basins. Multiple dry years (such as the 1987-1992 drought) pose the greatest challenge to the water district's water supply. Although the supply in each year may be greater than in a single very dry year, as droughts linger, storage reserves are relied on more and more.

2-3 CONCLUSIONS, FINDINGS AND CHALLENGES TO FUTURE WATER SUPPLY AVAILABILITY

Unmet Demand

Additional water supplies are needed to meet future water demands. Water demands are projected to increase to approximately 423,000 acre-feet per year by year 2035. Normal year supplies in year 2035 are anticipated to be approximately 419,000 acre-feet per year. This is a shortfall of approximately 4,000 acre-feet in a normal year. Shortfalls during an extended drought would be considerably greater. Water district modeling indicates that, as droughts linger, storage reserves are depleted and the county could experience shortages of more than 100,000 acre-feet per year under 2035 demand conditions without new investments in water supplies. To provide a reliable supply of water, the water district must make investments in a mix of new all-weather supplies, storage, dry-year transfers or option agreements, and maximizing water conservation.

Decrease in Supply

Projected imported supplies have decreased as a result of actions to protect fisheries in the Delta and the consequences of climate change. In response to the trend of Delta ecosystem decline and reduced water supply reliability, the water district has been working with state and federal resource agencies, conservation organizations, water agencies, local agencies and other interested parties to develop a comprehensive Bay Delta Conservation Plan (BDCP). The public draft BDCP is expected to be released at the end of June, 2012, with release of the final plan and environmental documentation targeted for December 2012. It is anticipated that implementation of the BDCP would improve the functioning of the Delta ecosystem and improve water supply reliability for 25 million Californians.

Risks and Uncertainties

Hydrologic, institutional and regulatory risks and uncertainties influence the projections of both local and imported water supplies and the anticipated reliability of those supplies. Risks and uncertainties include random occurrences of hazards and extreme events resulting in local and/or imported water outages, climate change, more stringent water quality standards, water quality contamination, fisheries protection measures, SFPUC changes in contracts with local water retailers, reduced deliveries and demand growth greater than projected. The water district's Integrated Water Resources Planning Study 2003 indicated that Delta levee failure risk and climate change are among the water district's top risks to water supply.

Investment Needs

The water district manages and addresses risks and uncertainties by building and maintaining a diversified portfolio of water supply sources and programs. This portfolio of existing supplies and new water supply investments is intended to meet future water demands. This portfolio will be reviewed and updated in a Water Supply and Infrastructure Master Plan scheduled for completion in 2012.

The major challenge to future water supply availability is how best to protect and augment existing water supply assets such as groundwater and surface water resources and the built infrastructure. As shown in Figure 2-2.1, it is paramount to ensure the continuing reliability and sustainability of existing supplies, since they constitute an irreplaceable supply foundation. The water district needs to continue to be vigilant in protecting the groundwater basins from overdraft and contamination, mitigating the diminishing imported and local supplies, and maintaining and replacing the aging water supply infrastructure. These infrastructure investment needs will be further discussed in Chapter Three of this report.

3

2012 PAWS REPORT

Programs to Sustain Supply Reliability

3-1 ACTIVITIES TO PROTECT AND AUGMENT WATER SUPPLIES OF THE DISTRICT

In May 2011, the water district's Board of Directors adopted groundwater production charges and other water charges to finance a program of activities to protect and augment water supplies of the water district. The program, to be undertaken in fiscal year FY 2011–12, is comprised of activities and service functions in the areas of operations, maintenance and construction, as illustrated in Table 3-1.1. These activities are designed to work together to meet water district board-adopted end goals and policies as well as to provide benefits to the community.

Table 3-1.1 Program Activities to Manage and Provide a Sustainable Water Supply

Sources	Activities to Protect & Augment Water Supplies		End Goals & Benefits
		Services and Functions	
• Sources of Water Supplies • Revenue from groundwater production charges & other sources of funding	Operation	• Planning & development • Water purchases • Transmission • Treatment • Distribution • Storage • Recharge • Conservation, water recycling & desalination • Regulatory compliance and mitigation	• Reliable, clean water supply for current and future generations • Delivery of reliable high quality drinking water • Sustainable water supply through integrated water management • Assets and resources managed for efficiency and reliability • Healthy, safe and enhanced quality of living in Santa Clara County
	Maintenance	• Surface & ground water resources protection & management • Asset protection & management	
	Construction	• Capital improvement • Infrastructure management	

For FY 2011–12 groundwater production charges were established in accordance with the FY 2011–12 budget[1] approved by the water district board. The groundwater production charges for North County M&I users increased by 9.4 percent or about $1.69 per month for the average household. The groundwater production charge for South County M&I users increased 3.6 percent or about $0.34 per month for the average household. Finally, the agricultural groundwater production charge was increased by 3.6 percent. The increases were necessary despite a fourth straight year of cost reductions because of lower water usage due to weather patterns and economic recession.

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[1] The budget document is available on the district website: www.valleywater.org

Revenue from groundwater production charges and treated water charges constituted the majority of funds needed to finance the operations costs of the Water Utility. Almost a third of the operating budget is needed for imported water purchases to augment local supplies. About a quarter of the operating budget is needed to provide treated water to augment groundwater supply in meeting water demand. The balance is used to provide program services including conjunctive management and protection of surface and ground water resources, operation and maintenance of facilities, water conservation, planning and development of recycled water and other alternative sources of supply, as well as administrative and support services.

Water district groundwater and treated water use in FY 2010-11 was slightly higher than the prior year but was roughly 15.6 percent lower than usage in FY 2007-08 due to the economic recession, above average precipitation and cooler weather. The water district continues to implement cost reductions to compensate for the lowered water revenue and an uncertain future. In fact, the district will save $11.4 million district wide over the next three years due to reductions in employee benefits that were recently negotiated with the district's employee unions.

Despite cost reduction impacts, the water district operated a full groundwater recharge program and met treated water demand with no water quality violations in FY 2010-11. Water conservation program services[2] and outreach activities continued as part of the district's long-term water conservation program. The asset management program and maintenance activities continued, including work at the water district's water treatment plants, pipelines, pump stations, as well as seismic stability evaluations at Anderson, Calero, Guadalupe, Almaden, Lenihan and Stevens Creek dams. There was no interruption in delivery of water supplies despite a shutdown on the South Bay Aqueduct and other planned shutdowns of water district facilities. The construction of the Advanced Recycled Water Treatment Plant, which was jointly developed with the Cities of San Jose and Santa Clara, is scheduled to be complete by December 2012. Upon completion, the treatment plant will be named the Silicon Valley Advanced Water Purification Center.

Water district staff has continued to participate in development of the Bay Delta Conservation Plan (BDCP) to improve the District's water quality and water supply reliability while balancing other beneficial uses and contributing towards a sustainable Delta ecosystem. The public draft BDCP and associated environmental documentation are expected to be released in June 2012, with the documents finalized in December 2012 and Record of Decision completed in February 2013.

3-2 FUTURE CAPITAL IMPROVEMENT, OPERATING AND MAINTENANCE REQUIREMENTS

For FY 2012–13, as well as the decades ahead, the highest priority work of the water district's Water Utility is to implement a program of activities to ensure reliable water supplies both now and in the future, to protect local surface and ground water supplies, and to meet treated water quality standards. This program of operations, maintenance and capital improvement activities will require continued funding from groundwater production charges and other sources of revenue, as described in Section 4 of this report.

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[2] The annual Water Use Efficiency Program Year End Report contains a complete description of actions taken by the district and the community in achieving water conservation goals. The report can be found at: www.valleywater.org.

The proposed FY 2012–13 operations and capital programs, as shown in Tables 4-5.1 and 4-5.2, continue to emphasize activities to protect and maintain existing water supplies and assets and to plan for contingencies due to both hydrologic uncertainties and regulatory restrictions on imported and local supplies. The proposed programs, if funded accordingly, will enable the Water Utility to provide reliable water supplies in the next year as well as in the future. Specific details about the operations program can be found in "The 5-Year Water Utility Enterprise Operations Plan".[3]

The current capital program is largely composed of asset renewal and management projects. This underscores the importance of protecting and maintaining existing water supplies and assets, as these provide the foundation for meeting current and future supply needs. In addition, the water district is developing a master plan to address future supply and infrastructure needs. Some highlights of the proposed FY 2012–13 capital programs are listed next.

Storage:

- Seismic evaluations of seven water district dams, and the resulting seismic retrofit of Anderson Dam
- Rehabilitation of Almaden Dam outlet works

Transmission:

- Raw water canal rehabilitation
- Addition of line valves for added system reliability

Water Treatment Plants:

- Seismic evaluation of operations buildings and resulting seismic retrofits
- Improvements at Rinconada Water Treatment Plant to rehabilitate several critical treatment plant facilities and increase plant reliability

Recycled Water:

- Construction of the Silicon Valley Advanced Water Purification Center at the San Jose/Santa Clara Water Pollution Control Plant to improve recycled water quality and allow for expansion of use
- Implementation of the Recycled Water Master Plan including addition of recycled water pipelines and reservoirs in Gilroy

A number of asset renewal and management activities, both capital and operating, will continue to be deferred until complete technical information or sufficient financial resources are available. The dam seismic stability evaluations at Stevens Creek, Lenihan, Chesbro, and Uvas Dams are examples of such projects. The seismic stability evaluations at Anderson, Almaden, Calero, and Guadalupe are basically complete; with resulting CIP projects planned and budgeted.

For any dams requiring a seismic retrofit, such as Anderson Dam, a whole site evaluation including spillway and freeboard adequacy and outlet condition will be needed. This may be a significant driver in capital program scope and costs.

With operating restrictions on a number of water district dams due to seismic deficiencies or questions about seismic adequacy, there may be impacts to current and future operating budgets such as the need to purchase additional water because of an inability to capture and utilize local runoff or store imported water.

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[3] The 5-Year Water Utility Enterprise Operations Plan can be accessed at: www.valleywater.org/Services/2012-13GroundwaterChargeProcess.aspx

Another potentially large impact to future operating and capital budgets is the cost to meet environmental permit requirements resulting from the impacts of operations and infrastructure improvements. Among these are the conservation measures needed to fulfill the Three Creeks Habitat Conservation Plans (Three Creeks HCP) and the Santa Clara Valley Habitat Plan (Valley HP). Together, these two plans, if approved, will meet federal Endangered Species Act[4] requirements to protect key species from impacts of routine water supply operations and flood control projects.

The need for the Three Creeks HCP arose from the 1996 listing of steelhead trout as a threatened species under ESA by National Marine Fisheries Service. Three Creeks HCP has expanded to include all surface water operations, dam maintenance and seismic safety retrofits in Stevens, Coyote and Guadalupe watersheds to ensure that in-stream flow needs for steelhead can be met.

The Valley HP is a separate joint effort with the County of Santa Clara, the Valley Transportation Authority and the cities of San Jose, Morgan Hill and Gilroy. The purpose of the Valley HP is to protect and create habitat for endangered terrestrial species in the Guadalupe, Coyote and Pajaro watersheds in Santa Clara County. The Valley HP was released for public comment in December 2010 and after much comment will be revised this year for approval by the water district board and elected officials from partner agencies in July 2012. Permits from regulatory agencies are expected to be issued in early 2013.

Implementation of the Three Creeks HCP and Valley HP will be a large financial commitment for the water district for decades to come in capital, operating and maintenance budgets. Costs have been estimated for both plans, but have not been completely integrated into the groundwater production charge projections, pending finalization of the two plans. In addition, the mitigation fees for the Valley HP are pay as you go, so costs will vary depending on how much of the covered work is actually carried out. The programmatic – as opposed to project-by-project – approach that habitat conservation plans provide will provide more certainty in mitigation cost over the permit term, as well as streamlining ESA permitting for covered activities within the respective permit areas.

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[4] The Endangered Species Act (ESA) is a federal law to ensure the conservation of threatened and endangered plants and animals and the habitats in which they are found. The ESA prohibits "take" of listed species through direct harm or destruction or adverse modification of designated critical habitat of such species. In the 1982 ESA amendments, Congress authorized the federal ESA implementing agencies, U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) Fisheries Service, through the Secretary of the Interior, to issue permits for the "incidental take" of listed species prior to permit holders proceeding with an activity that is legal in all other respects but would result in the incidental taking of a listed species. Prior to issuance of "take" permits, permit applicants are required to design, implement, and secure funding for a conservation plan that minimizes and mitigates harm to the impacted species during the proposed project. That plan is commonly called a Habitat Conservation Plan (HCP). HCPs are legally binding agreements between the U.S. Secretary of the Interior and the permit holder.

The California Endangered Species Act (CESA) is the state equivalent of the federal ESA. It states that all native species of fishes, amphibians, reptiles, birds, mammals, invertebrates, and plants, and their habitats, threatened with extinction and those experiencing a significant decline which, if not halted, would lead to a threatened or endangered designation, will be protected or preserved. CESA also allows for take incidental to otherwise lawful development projects. The state Department of Fish and Game is the CESA implementing agency, authorized to issue permits and memorandum of understanding.

4

2012 PAWS REPORT

Financial Outlook of Water Utility System

4-1 INTRODUCTION

This section summarizes the recommended charges for fiscal year (FY) 2012–13 and the multi-year financial analysis that serves as the foundation for the recommended water charges in each zone. The major sources of revenue for the Water Utility are from the imposition of charges on groundwater production and from contracts for the sale of treated surface water produced by its three treatment plants. The water district also receives revenue from surface water charges, recycled water charges, property tax, interest earnings, grants, capital reimbursements and other sources. The water district assesses the need for groundwater production and other water charges annually and, in accordance with state law, prepares this report to describe the activities undertaken to provide a water supply, along with the associated capital, maintenance, and operating requirements.

The Rate Setting Process

According to Section 26.3 of the District Act, proceeds from groundwater production charges can be used for the following purposes:

1. Pay for construction, operation and maintenance of imported water facilities
2. Pay for imported water purchases
3. Pay for constructing, maintaining and operating facilities which will conserve or distribute water including facilities for groundwater recharge, surface distribution, and purification and treatment
4. Pay for debt incurred for purposes 1, 2 and 3.

The work of the water district is divided into projects. Every project has a project plan which is prepared by the project manager. The project plan is a detailed description of the project including objectives, milestones, and an estimate of resources needed to deliver the project. To ensure compliance with the District Act, each project plan contains a justification as to whether or not groundwater production charges can be used to pay for the activities associated with it. The financial analysis presented in this report is based on these project plans.

Resolution 99-21 guides staff in the development of the overall pricing structure based on principles established in 1971. The general approach is to charge the recipients of the various benefits for the benefits received. More specifically, pricing is structured to manage surface water, groundwater supplies and recycled water conjunctively to prevent the over use or under use of the groundwater basin. Consequently, staff is very careful to recommend pricing for groundwater production charges, treated water charges, surface water charges and recycled water charges that work in concert to achieve the effective use of available resources.

This year's groundwater production and surface water charge setting process will be conducted consistent with the District Act, Board resolutions 99-21, 12-10 and 12-11[1], as well as Proposition 218's requirements for property-related fees for water services, although the applicability of Proposition 218's requirements is now an issue pending in the courts. The water district maintains that the groundwater production and surface water charges are not legally subject to those requirements. Whether legally bound or not, the water district is committed to a transparent water charge setting process.

Last year, the water district conducted a formal protest procedure of the proposed groundwater production charge increase, as provided for in Proposition 218's requirements for property-related fees for water services. The results of that procedure were that in the North County Zone W-2, less than 1.5 percent of well operators or property owners protested the proposed groundwater production charges, while in the South County Zone W-5, less than 1.6 percent of well operators or property owners protested. FY 2012–13 will be the third year in which the process includes a formal protest procedure to allow well operators and property owners to decide whether the Board may authorize an increase to the existing groundwater production charges. It will be the first year that a protest procedure will be implemented for surface water users. As in the past, the board will continue to hold public hearings and seek input from its advisory committees and the public before rendering a final decision on groundwater production and surface water charges for FY 2012–13.

Two years ago, the water district engaged Raftelis Financial Consultants, Inc. (RFC) to review the water district's cost of service and rate setting methodology used to calculate groundwater production charges for FY 2010–11. RFC has conducted over 600 rate and financial planning studies for water and wastewater utilities across the country. Specifically, RFC reviewed the cost of service and financial planning model developed by the water district to calculate groundwater production charges for FY 2010–11. RFC reviewed the water district's rate setting methodology for consistency with industry standards, best practices, and legal considerations such as Proposition 218, the District Act, and Resolution 99-21. The methodology used to calculate groundwater production charges for FY 2010–11 is detailed in RFC's report titled "Review of the Santa Clara Valley Water District's Cost of Service and Rate Setting Methodology for Setting FY 2011 Groundwater Production Charges"[2]. The report demonstrates that the water district developed groundwater production charges consistent with cost of service principles and legal considerations including Proposition 218, the District Act, and Resolution 99-21. The water district will use the same cost of service methodology for the FY 2012–13 rate setting process.

Last year, the water district engaged RFC and the water resources engineering firms of Hydrometrics Water Resources and Carollo Engineers to further analyze and quantify the conjunctive use benefit of treated water to groundwater and surface water customers. In addition, RFC analyzed the benefits of agricultural water usage to municipal and industrial users. This report titled "Report Documenting the Reasonableness of the Conjunctive Use Benefit of Treated Water to Groundwater and Surface Water Customers and the Benefit of Agricultural Customers to Municipal and Industrial Customers"[3] provides further support and justification for the water district's cost of service methodology.

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[1] Resolutions 99-21, 12-10, and 12-11 can be found at www.valleywater.org/Services/2012-13ChargeSettingProcess.aspx
[2] The initial RFC report can be found at www.valleywater.org/Services/2010-11ChargeSettingProcess.aspx
[3] The second RFC report can be found at www.valleywater.org/Services/2011-12GroundwaterChargeProcess.aspx

4-2 THE WATER CHARGE RECOMMENDATIONS FOR FISCAL YEAR 2012–13

Last year, FY 2011–12, the board chose to increase groundwater production charges in both zones of benefit. In the North County Zone W-2, the board adopted a $569 per acre-foot groundwater production charge for non-agricultural water, $17.10 per acre-foot for agricultural water, and $669 per acre-foot for contract treated water. In the South County Zone W-5, the board adopted a $285 per acre-foot groundwater production charge for non-agricultural water, and $17.10 per acre-foot groundwater production charge for agricultural water. To maintain affordable rates, 92 positions have been eliminated district-wide over the past four years with more cuts anticipated in the future, discretionary reserves have been drawn down to minimum per policy, temporary staff and overtime have been reduced significantly, and some projects have been canceled or delayed. In addition, the District recently negotiated new agreements with its employee unions which will save $11.4 million over the next 3 years. Starting in April 2012, employees will contribute 15 percent of their health care premiums. Union-represented employees will receive no cost of living adjustment in 2012. Also, employees will contribute an additional 1.1 percent, for a total of 11 percent of their salary, toward the California Public Employees Retirement System (CalPERS).

However, the district must invest significant capital dollars into repairing and rehabilitating the infrastructure that keeps water flowing uninterrupted to your tap. Today many of our dams are not seismically safe. The District plans to invest $1.0 billion over the next 10 years on critical infrastructure repair like the dam fixes to continue providing the level of service you’ve come to expect. Accomplishing the infrastructure repair and maintenance plan will require increases in water charges for FY 2012–13 and future years. For FY 2012–13 in the North County, staff recommends a 9.3 percent increase, or $622 per acre-foot groundwater production charge for non-agricultural water; 3.5 percent increase, or $17.70 per acre-foot for agricultural water; 7.9 percent increase, or $722 per acre-foot for contract; and 8.6 percent increase or, $672 per acre-foot for non-contract treated water. The average household would experience an increase in their monthly bill of $1.83 or about 6 cents a day.

In the South County, staff recommends a 3.5 percent increase to both non-agricultural and agricultural water. This results in a $295 per acre-foot groundwater production charge for non-agricultural water, and $17.70 per acre-foot groundwater production charge for agricultural water. The average household would experience an increase in their monthly bill of $0.34 or about 1 cent per day

Surface water users pay the basic user charge, which is set equivalent to the groundwater production charge, and a surface water master charge. The basic user charge helps pay for the cost to manage and augment surface water supplies and is set equal to the groundwater production charge because surface water is considered in-lieu groundwater usage. The surface water master charge pays for costs that are specific to surface water users only, including the work to operate surface water turnouts, and maintain surface water accounts.

Staff recommends increasing the surface water master charge by 3.5 percent, from $12.17 per acre-foot to $12.60 per acre-foot, in order to bring revenues in closer alignment with the costs related to managing, operating and billing for surface water diversions.

Figure 4-2.1 illustrates the multi-year groundwater production charge projection. It reflects a range of potential groundwater production charges over the next ten years depending on the level of service to be provided. The high end of the range (line immediately above the shaded areas) represents the groundwater production charges required to fund all of the operations and capital projects identified by staff to meet the board's Ends Policies over the next few years. The potential impacts of not funding the high end of the range include increased risk of (1) service interruptions, (2) higher corrective maintenance costs to repair facilities that have not been well maintained and (3) reduced ability to respond to drought. While staff has identified as many projects as possible, there are initiatives and/or potential future uncertainties that could result in the identification of additional capital or operations projects that are not reflected in the high end of the range.

The lower end of the range (line immediately below the shaded areas) represents staff's recommended groundwater production charges for FY 2012–13 and the corresponding future trajectory based on the assumption that operating services will either continue at or below the level budgeted in FY 2011–12.

Figure 4-2.1 Ten Year Projection

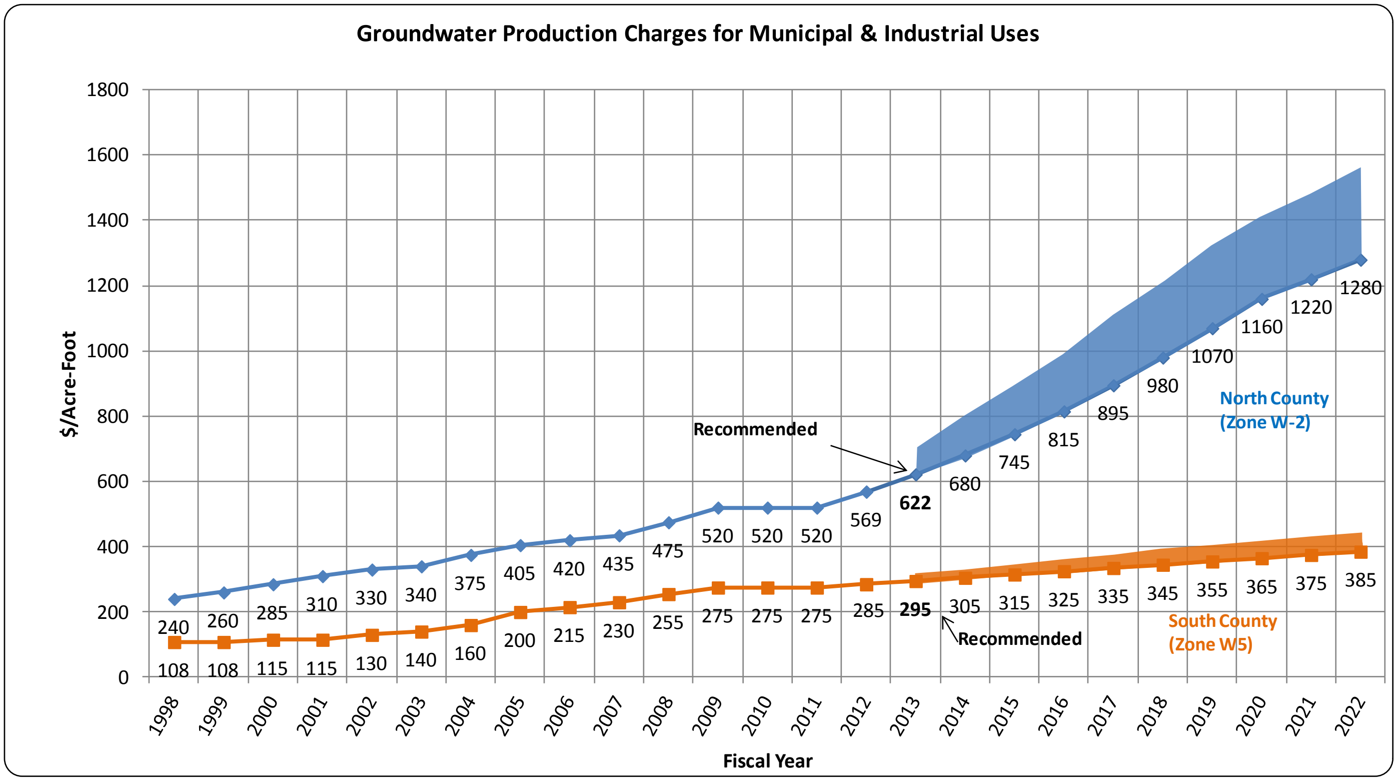


Table 4-2.1 shows groundwater production and other charges in fiscal years 2010–11 and 2011–12. The final column contains the recommended water charges for FY 2012–13, which are in accordance with the pricing policy described in Resolution 99-21.

Table 4-2.1 Summary of Charges (Dollars Per Acre-Foot, $/AF)

	Dollars Per Acre Foot		
	FY 2010–11	FY 2011–12	Recommended FY 2012–13
Zone W-2 (North County)			
Basic User/Groundwater Production Charge			
Municipal & Industrial	520.00	569.00	622.00
Agricultural	16.50	17.10	17.70
Surface Water Charge			
Surface Water Master Charge	11.75	12.17	12.60
Total Surface Water, Municipal & Industrial*	531.75	581.17	634.60
Total Surface Water, Agricultural*	28.25	29.27	30.30
Treated Water Charges			
Contract Surcharge	100.00	100.00	100.00
Total Treated Water Contract Charge**	620.00	669.00	722.00
Non-Contract Surcharge	50.00	50.00	50.00
Total Treated Water Non-Contract Charge***	570.00	619.00	672.00
Zone W-5 (South County)			
Basic User/Groundwater Production Charge			
Municipal & Industrial	275.00	285.00	295.00
Agricultural	16.50	17.10	17.70
Surface Water Charge			
Surface Water Master Charge	11.75	12.17	12.60
Total Surface Water, Municipal & Industrial*	286.75	297.17	307.60
Total Surface Water, Agricultural*	28.25	29.27	30.30
Recycled Water Charges			
Municipal & Industrial	275.00	275.00	275.00
Agricultural	41.50	41.50	41.50

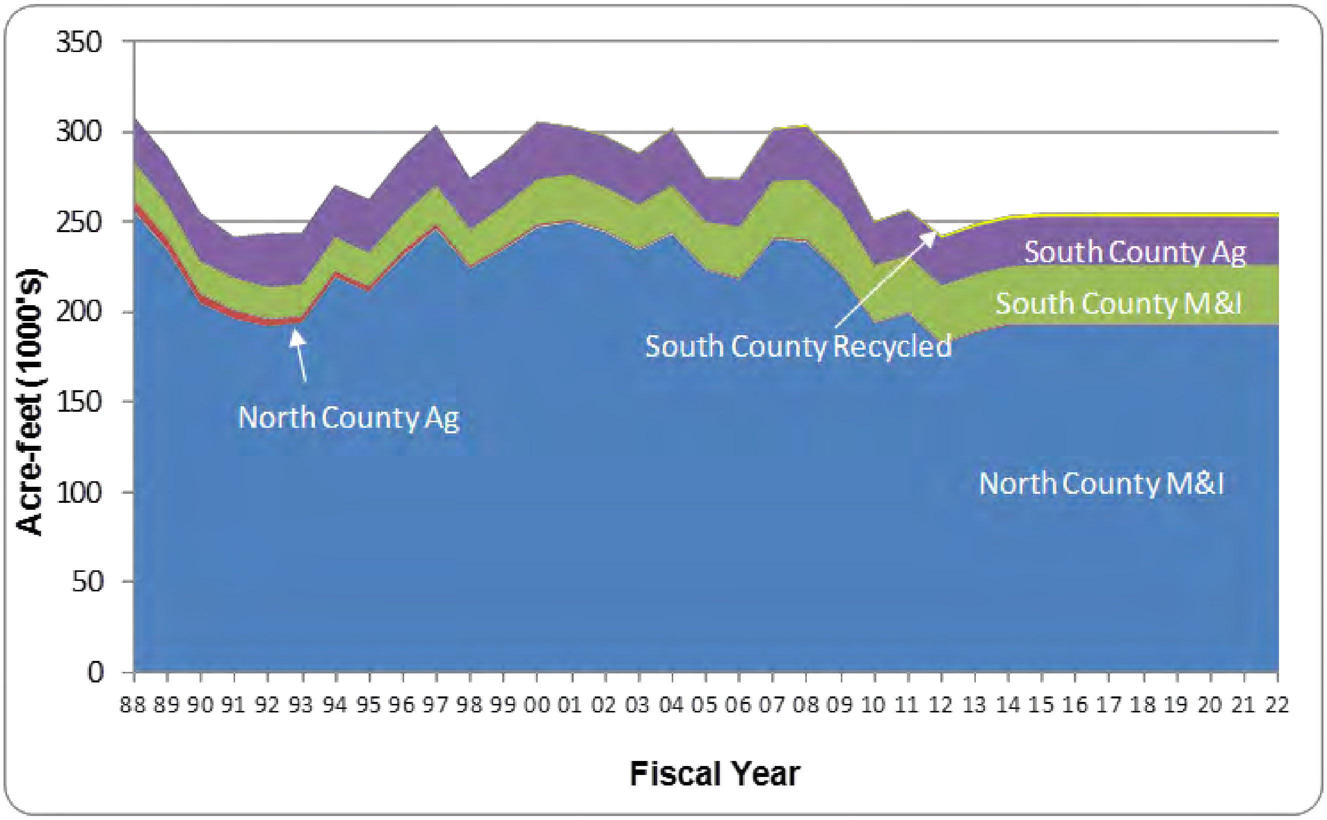
*Note: The total surface water charge is the sum of the basic user charge (which equals the groundwater production charge) plus the water master charge

**Note: The total treated water contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the contract surcharge

***Note: The total treated water non-contract charge is the sum of the basic user charge (which equals the groundwater production charge) plus the non-contract surcharge

Figure 4-2.2 illustrates historical and projected water district water use, which is a key driver of the water district's water revenue. Lower current year water usage has prompted staff to reduce the future water usage projection by about 11,000 acre-feet per year relative to the prior year projection. For FY 2012–13, the total water district water use projection is 249,000 acre-feet or roughly equal to FY 2009-10 actual. Water use is projected to ramp up to roughly 255,000 acre-feet by FY 2014–15.

Figure 4-2.2 Historical and Projected Water District Water Use



4-3 FINANCIAL OVERVIEW OF THE WATER DISTRICT

The water district uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. Fund accounting allows government resources to be segregated and accounted for according to their intended purposes. Accounts related to activities of the Water Utility are segregated into the Water Utility Funds comprised of the Water Utility Enterprise Fund and the State Water Project (SWP) Fund. For the Water Utility Enterprise Fund, revenue accounts include: groundwater production, treated water, property taxes, surface water, interest earnings, reimbursements, grants and other. Cost accounts include both direct and indirect costs associated with Water Utility projects and activities. The SWP Fund accounts specifically for SWP Tax revenue and SWP contractual costs (Note that SWP Tax revenue can only be spent on SWP contractual costs). Table 4-3.1 shows an overview of the funds at the water district including the Water Utility Funds and the estimated revenues, costs and reserves for FY 2012–13 for each fund. Throughout this report, the term "Water Utility" or "Water Utility Enterprise" refers to the combination of the Water Utility Enterprise Fund and the State Water Project Fund.

Table 4-3.1 FY 2012–13 Projected Funds Analysis

	Water Utility Funds			
(Millions $)	**Water Utility Enterprise Fund**	**State Water Project Fund**	**Watershed Funds**	**Administration Funds**
Revenue[1]	149.0	20.0	140.5	4.8
Interfund Transfer	2.8	1.0	(1.9)	(1.9)
Ops Costs & Xfers	(114.6)	(23.4)	(56.9)	(53.1)
Debt Svc	(15.3)	-	(15.7)	(0.8)
Capital	(77.8)	-	(70.8)	(4.6)
Debt Proceeds	23.4	-	-	-
Intra-District Reimb.[2]	-	-	-	54.8
Balance	**(32.5)**	**(2.4)**	**(4.8)**	**(0.7)**
Reserves				
Restricted	25.9	-	101.6	-
Committed	32.8	-	49.2	3.7
Designated Liability	6.4	-	-	12.0
Total Reserves	**65.2**	**-**	**150.8**	**15.7**

Notes:

[1] Watershed revenue includes $36.1M of capital reimbursements

[2] Intra-District Reimbursements represent overhead costs that have been allocated to the Water Utility & Watersheds (included in the operations and capital costs for those funds)

The Watershed Funds are a segregated grouping of funds with separate funding sources (including Benefit Assessments, 1 percent ad valorem property taxes and a special tax) for the purpose of providing flood protection and watershed management. The Administration Funds include the General Fund, the Equipment Fund and the Risk Fund to account for all revenues and expenditures necessary to carry out basic governmental activities of the water district that are not accounted for through other funds. Administration Funds expenditures that are not offset by Administration Funds revenues are allocated to the Water Utility and Watershed funds through an overhead rate at the project level.

4-4 WATER UTILITY FINANCES FOR FISCAL YEARS 2010–11 & 2011–12

Fiscal Year 2010– 11

Actual overall revenue for FY 2010–11 was $9.2 million less than the adopted budget. This shortfall was due primarily to lower water usage which equated to $11.9 million reduced water charge revenue. It was also due to $1.2 million of lower interest earnings and other revenue related to claims and judgments as well as refunds and adjustments. These shortfalls were offset by $3.1 million greater than anticipated capital reimbursements, and $0.8 intergovernmental services and property taxes.

Actual operations outlays were $9.8 million lower than adopted budget. The savings were driven by $2.5 million of debt service savings for the 2007 taxable water utility certificates of participation, about $4.4 million in the South Bay Aqueduct Imported Water Deliveries and $2.9 million net cost savings in various other projects.

Unspent capital budget was carried forward to FY 2011–12 consistent with accounting practices.

Fiscal Year 2011– 12

Depending on whether it is a dry or wet spring, current estimates for FY 2011–12 show revenue trending between $2 million and $4 million below budget. This is due primarily to water usage trending below anticipated levels.

4-5 OVERVIEW OF OPERATING AND LONG-TERM CAPITAL PLANS

To develop a charge structure that will support planned work, staff analyzes the immediate needs of the water district as well as anticipated requirements in the years to come.

Operating Outlays

Operations costs are projected to increase at an average of 4.5 percent per year over the next ten years. The increase is driven by anticipated inflation, cost increases associated with employee salaries and benefits, ramping up operations and maintenance associated with the new Silicon Valley Advanced Water Purification Center, and rising costs associated with regulatory requirements.

Table 4-5.1 shows the water district's Water Utility operating program for FY 2010–11, FY 2011–12, and projected for FY 2012–13. Specific details about the programs and projects funded within the water utility can be found in "The 5-Year Water Utility Enterprise Operations Plan[4]." The Water Utility Enterprise strives to implement a program that ensures that treated water quality standards are met and that water supplies are reliable to meet current and future demand.

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[4] The 5-year Water Utility Enterprise Operations Plan can be accessed at www.valleywater.org/Services/2012-13GroundwaterChargeProcess.aspx

Table 4-5.1 Operating Budget Summary

		Thousands $			
Cost Center	Ends Policy	Actuals FY 11	Adj Bud FY 12	Projected FY 13	Description of Cost Centers and Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	66,828	68,652	74,610	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs. Activities include: groundwater level & quality monitoring; groundwater modeling; dams and reservoir operations & maintenance; imported water supply management; long-term Delta issues resolution; operations and maintenance of San Felipe Reaches 1-3, including mechanical, electrical and SCADA; operations planning; water rights protection; Urban Water Management Plan; administration of recycled water agreements, technical studies, recycled water rebates; water conservation technical assistance, financial incentives, outreach and education; environmental planning & compliance; well permitting and destruction; and habitat conservation and mitigation commitments.
Raw Water Transmission Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	8,686	8,750	9,413	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems. Activities include: operations and maintenance of recharge ponds, canals, pipelines & diversions including vegetation management; operations and maintenance of raw water distribution system, including mechanical, electrical and SCADA; raw water corrosion control; environmental compliance support.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	27,818	29,795	32,900	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to retail customers and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts. Activities include: operations and maintenance of 3 water treatment plants; Water District laboratory operations; water quality planning, testing, research, and reporting; operations and maintenance of treated water transmission and distribution system; and recycled water T&D general maintenance.
Administration & General	Support Services	16,504	18,144	20,268	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Activities include: asset protection evaluation and planning; integrated regional water management plan; water system computer modeling; biodiversity monitoring; urban runoff pollution prevention; general & division management; performance measures; financial support & water charge setting; customer relations; health and safety training; billing; data maintenance; auditing; meter reading, testing, repair, installation, backflow prevention; emergency services; warehouse and equipment services; real estate services; and ethics & diversity
Other	Cost Adjustments		3,365	786	Operating cost reductions or adjustments
	Total Program Requirements	**119,835**	**128,707**	**137,976**	

Capital Improvements Plans

The water district constructs, operates and maintains reservoirs, pipelines, recharge facilities, and water treatment plants that are needed to achieve the board's Ends Policies. On an annual basis, the water district conducts a process to plan for capital improvements and identify the resource needs and constraints to implement the projects. The result of this process is board approval of a 5-Year Capital Improvement Program (CIP)[5].

Table 4-5.2 shows the capital projects identified in a preliminary version of the FY 2012–13 CIP and associated expenditures for the next ten fiscal years. The table shows funding just over $1.0 billion (inflated) worth of capital projects between FY 2012–13 and FY 2021–22. A large portion of the capital program is dedicated to asset management of Water Utility Enterprise facilities throughout the county and is based on a program to provide a better basis for identifying long-term capital rehabilitation and replacement needs. Staff recently executed a validation process as part of the water district's Asset Management Program, to identify if there is a compelling business case for capital projects. The process was tested on a select group of projects currently in the water district's 5-Year CIP. Projects were modified in the FY 2012–13 CIP based on the result of the validation process. In the future, all newly-proposed projects will undergo the validation process prior to being proposed for inclusion in the CIP.

A consultant was selected in February 2011 to conduct a performance audit of the water district's Capital Program Services Divisions. The purpose of the audit is to assess the effectiveness and efficiency of the district's capital project delivery system, management of the capital program, and oversight of consultants and contractors, from project initiation through completion of construction and transfer to operations. The final report on the audit is expected in March or early April 2012. The next step will be for staff to develop an implementation plan to address the recommendations from the audit.

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[5] The latest CIP can be accessed at www.valleywater.org/Programs/CapitalImprovementProgram.aspx

Table 4-5.2 Capital Improvements Projects – Fiscal Years 2012–13 Through 2021–22

	Planned Funding with Inflation (Thousands $)						
Name	FY13	FY14	FY15	FY16	FY17	FY 18–22	Total FY 13–22
SOURCE OF SUPPLY							
Dam Maintenance Plan Mitigation*		184					**184**
Dam Safety Program Seismic Stability*	755	191					**946**
Recycled Water Masterplan - Short-Term Implementation 1A*							**0**
South County Recycled Water Pipeline - Short-Term Implementati	860	1,506	1,453	7,879	811		**12,509**
San Tomas Well Field							**0**
South Bay Advanced Recycled Water Treatment Plant	1,461	318					**1,779**
San Luis Reservoir Low Point Improvement - Planning	12						**12**
Small Capital Improvements, San Felipe Reach 1*	1,002	1,032	1,063	1,095	1,128	6,170	**11,490**
Almaden Dam Outlet Works Improvements	1,317	1,656	12,941	200			**16,114**
Jacques Gulch Restoration	35	34	85				**154**
Anderson Dam Seismic Retrofit*	876	9,707	15,429	42,601	43,183	1,563	**113,359**
Pacheco Pumping Plant ASD Replacement*	1,194	255					**1,449**
Central Valley Project Capital Payments*	7,389	7,650	7,920	8,200	8,764	50,180	**90,103**
Anderson Dam Outlet Works*			4,371	28,138	28,982		**61,491**
Source of Supply Subtotal	**18,337**	**27,298**	**48,689**	**100,321**	**98,667**	**150,791**	**444,103**
RAW WATER TRANSMISSION & DISTRIBUTION							
Radio Repeater System Infill - 47%*		150					**150**
Pacheco/Santa Clara Conduit Right of Way Acquisition*	702	738	158				**1,598**
Penitencia Force Main Seismic Retrofit	283	318	2,732				**3,333**
IRP2 Backup Raw Water Control Center at Almaden*		39	129	828	659		**1,655**
Alamitos Diversion Dam Improvements						505	**505**
Coyote Diversion Dam Improvements				647	1,240		**1,887**
Kirk Diversion Dam & Fish Screen Improvements		405					**405**
Small Capital Improvements, Raw Water Transmission*	696	676	696	717	738	4,038	**7,561**
Stevens Creek Supplemental Water				119	1,313	33,993	**35,425**
FAHCE Stevens Creek Evelyn Ave Fish Ladder - 90%				1,003	1,517		**2,520**
FAHCE Stevens Creek Moffett Ave Fish Ladder - 90%				989	1,856		**2,845**
FAHCE Stevens Creek Fremont Ave Fish Ladder - 90%				293	806	4,140	**5,240**
FAHCE Stevens Creek Multi-Port Outlet at Dam - 90%				253	1,015		**1,268**
Ogier Ponds Separation from Coyote Creek*						2,990	**2,990**
Cathodic Protection of USBR-Owned Pipelines*		504	478	3,950			**4,932**
Coyote Creek Bypass						105,672	**105,672**
Raw Water Transmission & Distribution Subtotal	**1,681**	**2,830**	**4,193**	**8,799**	**9,145**	**151,338**	**177,986**
ADMINISTRATION AND GENERAL							
Capital Training and Development*	245	279	349	345	379	1,943	**3,541**
CIP Development & Admin*	465	529	661	653	719	3,681	**6,708**
CPSD Management & Support*	1,745	1,252	2,254	3,239	3,709	19,305	**31,505**
Technical Review Committee*	283	323	403	398	438	2,245	**4,091**
Capital Healty & Safety Training*	183	208	260	257	282	1,447	**2,636**
5-Year Pipeline Rehabilitation*	4,133	3,063	6,610	3,955	5,128		**22,889**
SCW Regionally Significant Habitat Land Acquisition*		566	583	600	618	3,382	**5,749**
Projected Carryforward*	35,039						**35,039**
Administration and General Subtotal	**42,093**	**6,221**	**11,120**	**9,448**	**11,273**	**32,004**	**112,159**

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

Table 4-5.2 Capital Improvements Projects – Fiscal Years 2012–13 Through 2021–22 (Continued)

	Planned Funding with Inflation (Thousands $)						
Name	FY13	FY14	FY15	FY16	FY17	FY 18-22	Total FY 13 - 22
WATER TREATMENT							
PWTP Water Pumps Modification		386	368	119			**873**
PWTP Clearwell Recoating & Repair	186	2,833	33				**3,052**
STWTP Incompatible Materials	3,229	143					**3,372**
RWTP Standby Power System Upgrade	127						**127**
RWTP FRP Residuals Management Modifications	311	16,306	973	146			**17,736**
RWTP FRP Primary Electrical System Improvement	0						**0**
RWTP Treated Water Valves Upgrade	494	3,156	546	28			**4,224**
RWTP Reliability Improvement	8,505	8,477	52,637	57,536	58,091	18,574	**203,820**
IRP2 Well Fields	265	265	1,257	1,126	6,376	12,358	**21,647**
IRP2 Seismic Study and Retrofit of WTP Ops Bldg		10,509	1,084				**11,593**
Small Capital Improvements, Water Treatment	1,220	1,328	1,417	1,460	1,504	8,222	**15,151**
RWTP BL-1 Valve & Vault Replacement			244	1,145	115		**1,504**
PWTP Washwater Clarification Facility				524	621	6,783	**7,928**
Water Treatment Subtotal	**14,337**	**43,403**	**58,559**	**62,084**	**66,707**	**45,937**	**291,027**
TREATED WATER TRANSMISSION & DISTRIBUTION							
Water Protection*							**0**
Penitencia Delivery Main Seismic Retrofit	283	318	2,732				**3,333**
Small Capital Improvements, Treated Water Transmission	1,034	1,048	1,080	1,112	1,145	6,264	**11,683**
IRP2 Additional Line Valves			710	878	6,861		**8,449**
Treated Water Transmission & Distribution Subtotal	**1,317**	**1,366**	**4,522**	**1,990**	**8,006**	**6,264**	**23,465**
TOTAL (FUNDED)	**77,765**	**81,118**	**127,083**	**182,641**	**193,799**	**386,334**	**1,048,740**

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

Table 4-5.3 shows the lower priority or deferred capital projects that are not funded under the recommended charges for FY 2012–13. The postponed capital projects total approximately $533 million (inflated) over the next ten years. A higher groundwater production charge projection would be necessary to fund these postponed capital projects.

Table 4-5.3 List of Capital Projects Postponed Indefinitely

	Planned Funding with Inflation (Thousands $)						
Name	Year 1	Year 2	Year 3	Year 4	Year 5	Years 6-10	Total Years 1-10
SOURCE OF SUPPLY							
Recycled Water Masterplan - Long-Term Implementation*	8,090	112					**8,202**
Dam Seismic Stability at 4 Dams (Placeholder)*					40,000	160,000	**200,000**
DHCCP[1] Implementation and Other Delta Projects*	1,000	1,030	10,061	10,363	10,674	58,368	**91,496**
Full-scale recycled water implementation*			40,000	40,000	40,000	80,000	**200,000**
Source of Supply Subtotal	**9,090**	**1,142**	**50,061**	**50,363**	**90,674**	**298,368**	**499,698**
RAW WATER TRANSMISSION & DISTRIBUTION							
Valve 906 Low-Flow Bypass	125	31					**156**
Santa Clara Tunnel Leakage and Pacheco Conduit Dewater*	471	232	2,689				**3,392**
Church Avenue Diversion*	1,372	429	2,330	65			**4,196**
Coyote Pumping Plant ASD Replacement	372	428	566	3,153	2,785	2,676	**9,980**
Raw Water Transmission & Distribution Subtotal	**2,340**	**1,120**	**5,585**	**3,218**	**2,785**	**2,676**	**17,724**
WATER TREATMENT							
RWTP Waste Stream Separation Modification	108	648	56				**812**
WTP Filter Backwash Aid	323	1,739	175				**2,237**
Water Treatment Subtotal	**431**	**2,387**	**231**	**0**	**0**	**0**	**3,049**
TREATED WATER TRANSMISSION & DISTRIBUTION							
Milpitas Pipeline Terminus Valve & Vault	106	123	185	1,251	267		**1,932**
Treated Water Transmission & Distribution Subtotal	**106**	**123**	**185**	**1,251**	**267**	**0**	**1,932**
ADMINISTRATION AND GENERAL							
Almaden Campus Office Building (assume 60% WU)*	120	420	1,170	6,870			**8,580**
Fleet Building Improvements (assume 60% WU)*	525	1,725					**2,250**
Administration and General Subtotal	**645**	**2,145**	**1,170**	**6,870**	**0**	**0**	**10,830**
TOTAL UNFUNDED	**12,612**	**6,917**	**57,232**	**61,702**	**93,726**	**301,044**	**533,233**

[1] Delta Habitat Conservation and Conveyance Program

Note: The asterisked projects would benefit the South County and therefore would be funded in part or in whole by the South County.

4-6 FINANCES

Financing and Bond Rating

To fund the construction of new facilities, the water district has historically relied on both pay-as-you-go financing and long-term debt financing as authorized by the voters in 1984. Water utility debt service will decrease by roughly $0.4 million in FY 2012–13 due to the completion of debt service payments on a series of general obligation bonds issued between 1963 and 1972. Accordingly, the Zone W-1 property tax established to fund the debt service payments will cease in FY 2012–13. Looking forward, capital improvement needs total $1.0 billion (in inflated dollars) for the ten fiscal years 2012–13 through 2021–22. The District recently issued a Request for Proposal (RFP) seeking to reestablish a short term debt facility to provide just-in-time bridge financing between long-term debt issuances. As shown in Figure 4-6.1, the water district will see debt service rise from $15.3 million in FY 2012–13 to just over $68.5 million in FY 2021–22 as a result of periodic debt issuances to fund capital projects. Total outstanding debt (excluding general obligation bonds) is shown in Figure 4-6.2 and is projected to increase from $291 million in FY 2012–13 to $856 million in FY 2021–22. This outstanding debt could be significantly higher if all postponed capital projects were funded. Conversely, the debt could also be reduced if projects are reduced or further external funding is found.

Figure 4-6.1 Projected Debt Service

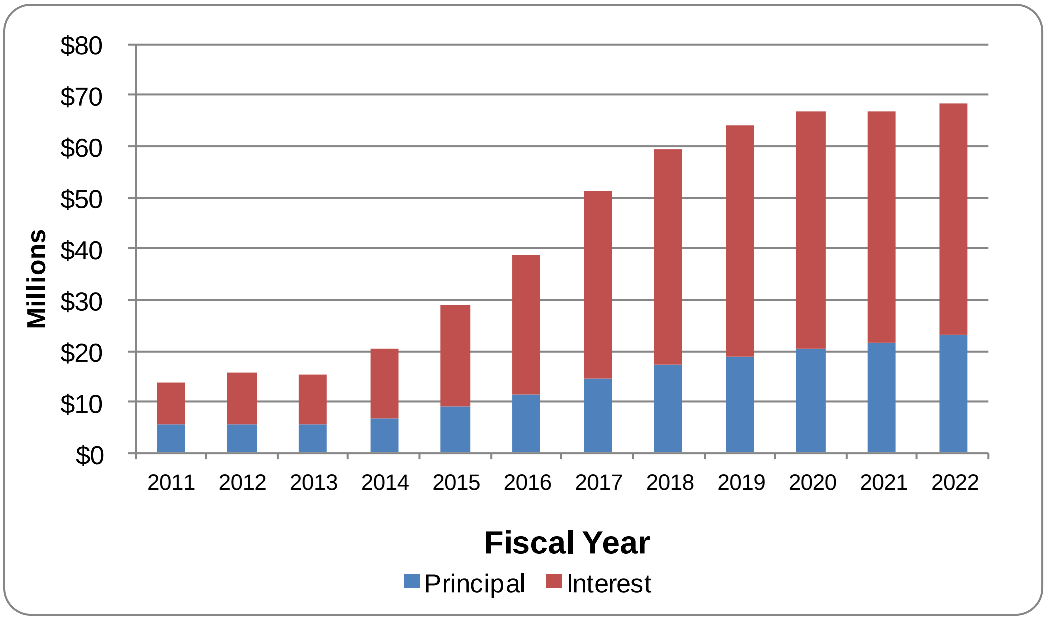
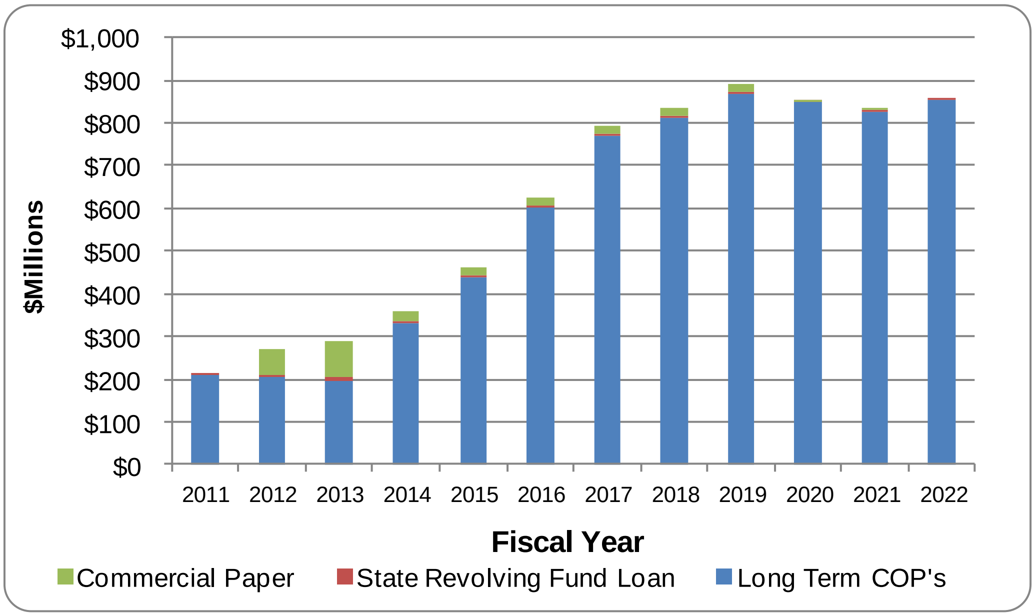


Figure 4-6.2 Projected Outstanding Debt



The water district was upgraded to a rating of Aa1 from Moody's in the Spring of 2010 while the Standard & Poor's rating was maintained at AA. These ratings reflect the water district's strong financial position and the highly rated creditworthiness of water district issued securities. The ratings are among the highest for a water-related governmental entity in the state of California, which helps keep interest costs borne by the water district at a minimum.

Water Utility Funds Projected Proforma

Table 4-6.1 shows the projected revenues, expenditures, and reserves over the next ten years for the Water Utility Funds. By financing with a combination of debt, current year revenue, and reserves, the water district is able to meet its capital investment plan. Under the recommended projection, the financial model assumes that discretionary reserves (the operating and capital reserve plus the supplemental water supply reserve) are maintained at minimum per district policy. The minimum per policy for these reserves equates to having just under 3 months worth of Water Utility operating outlays in the bank. These reserves serve several purposes including: to meet cash flow needs; provide emergency funding; and to provide a funding source for future operating and capital needs. The water district's reserve policy can be found within the Financial Summaries section of the FY 2011–12 Budget document.[6]

The financial model under the recommended projection reflects a senior Lien Debt Service Coverage Ratio ranging between 1.95 and 2.56 through FY 2021–22. Targeting a ratio of 2.0 or better helps to ensure financial stability and continued high credit ratings.

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[6] The FY 2011-12 Budget document is located at http://www.valleywater.org/About/Finance.aspx.

Table 4-6.1 Ten-Year Water Utility Plan – ($ in Thousands)

	Actual	Budget	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected	Projected
	2010–11	2011–12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Operating Revenues												
Groundwater Production Charges	$50,383	$61,603	$55,467	$63,035	$68,752	$74,555	$81,138	$88,112	$95,477	$102,842	$107,863	$112,885
Surface & Recycled Water Charges	$829	$1,304	$1,427	$1,573	$1,734	$1,900	$2,083	$2,244	$2,405	$2,563	$2,681	$2,798
Treated Water Charges	$70,135	$69,099	$81,946	$88,529	$95,906	$103,851	$112,931	$122,578	$132,793	$143,008	$149,818	$156,628
Inter-governmental Services	$1,459	$1,676	$2,595	$4,117	$3,834	$4,444	$5,169	$5,242	$5,331	$5,410	$5,513	$2,398
Total Operating Revenue	**$122,805**	**$133,682**	**$141,435**	**$157,254**	**$170,226**	**$184,750**	**$201,321**	**$218,176**	**$236,006**	**$253,823**	**$265,875**	**$274,709**
Non-Operating Revenues												
Property Taxes	$23,182	$21,173	$22,757	$24,785	$26,814	$28,842	$31,871	$34,900	$37,929	$40,959	$43,988	$47,018
Interest	$2,325	$1,560	$572	$588	$887	$1,312	$1,605	$2,342	$2,748	$2,995	$3,547	$3,829
Capital Contributions	$10,443	$14,023	$2,836	$2,775	$1,418	$1,373	$1,384	$396	$407	$420	$432	$445
Other	$1,575	$1,396	$1,396	$1,397	$1,397	$1,397	$1,398	$1,398	$1,398	$1,399	$1,399	$1,399
Total Non-Operating Revenues	$37,525	$38,152	$27,561	$29,545	$30,516	$32,924	$36,258	$39,036	$42,482	$45,772	$49,367	$52,692
Total Revenue	**$160,330**	**$171,834**	**$168,996**	**$186,799**	**$200,742**	**$217,674**	**$237,578**	**$257,212**	**$278,488**	**$299,595**	**$315,242**	**$327,401**
Operating Outlays												
Operations	$115,946	$126,339	$135,054	$142,918	$147,190	$151,705	$157,919	$162,489	$169,758	$177,765	$185,757	$193,481
Operating Projects	$3,889	$2,368	$2,922	$2,697	$2,319	$3,008	$1,207	$1,298	$5,478	$5,513	$5,563	$5,605
Debt Service	$13,947	$15,808	$15,343	$20,219	$29,024	$38,907	$51,162	$59,580	$64,198	$66,704	$66,718	$68,477
Total Operating Outlays	$133,782	$144,515	$153,319	$165,834	$178,533	$193,620	$210,288	$223,367	$239,434	$249,982	$258,039	$267,563
Operating Transfers In/(Out)	2,811	3,281	3,821	3,951	4,080	4,210	4,339	19,469	4,598	4,728	4,857	4,987
Debt Proceeds	0	62,946	23,424	60,353	104,130	158,975	168,191	55,587	65,993	(20,499)	2,566	43,574
Capital Outlay	(82,383)	(69,732)	(77,765)	(81,118)	(127,083)	(182,641)	(193,799)	(105,111)	(100,576)	(26,431)	(35,185)	(119,032)
Total Other Financing Sources/ (Uses)	(79,572)	(3,505)	(50,520)	(16,815)	(18,873)	(19,457)	(21,269)	(30,055)	(29,985)	(42,202)	(27,761)	(70,471)
Balance Avaliable	**(53,025)**	**23,815**	**(34,842)**	**4,150**	**3,336**	**4,598**	**6,022**	**3,790**	**9,069**	**7,411**	**29,441**	**(10,634)**
Reserves:												
Restricted Reserves:												
WUE-Restricted Operating Reserve	$11,966	$11,757	$12,777	$13,820	$14,878	$16,135	$17,524	$18,614	$19,953	$20,832	$21,503	$22,297
WUE - Rate Stablization Reserve	$1,647	$1,579	$1,579	$1,579	$1,579	$1,579	$1,579	$1,579	$1,579	$1,579	$1,579	$1,579
San Felipe Emergency Reserve	$3,924	$3,868	$3,924	$3,924	$3,924	$3,924	$3,924	$3,924	$3,924	$3,924	$3,924	$3,924
Revenue Bond Debt Service Reserve	$4,675	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889	$4,889
State Water Project Tax Reserve	$4,211	$2,357	$2,357	$2,357	$2,357	$2,357	$2,357	$2,357	$2,357	$2,357	$2,357	$2,357
State Revolving Fund	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401	$401
Total Restricted	$26,824	$24,851	$25,927	$26,970	$28,028	$29,285	$30,674	$31,764	$33,103	$33,982	$34,653	$35,447
Committed Reserves:												
Floating Rate Debt Stabilization	$594	$475	$594	$594	$594	$594	$594	$594	$594	$594	$594	$594
Designated for Operating and Capital	$8,468	$23,991	$23,183	$25,890	$27,767	$30,708	$34,941	$37,241	$44,571	$50,703	$79,073	$67,245
Supplemental Water Supply Appropo.	$9,102	$8,658	$9,058	$9,458	$9,858	$10,258	$10,658	$11,058	$11,458	$11,858	$12,258	$12,658
Total Designated Reserves	$40,426	$68,163	$32,834	$35,942	$38,219	$41,560	$46,192	$48,893	$56,622	$63,154	$91,924	$80,497
Designated Liability & Other:												
GO litigation liability	$6,414	$6,090	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414
Total Designated Liability & Other	$6,414	$6,090	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414	$6,414
Total	$73,664	$99,104	$65,175	$69,325	$72,661	$77,259	$83,280	$87,071	$96,140	$103,551	$132,992	$122,358
Debt Service Coverage												
Senior Lien Debt Service Coverage	2.30	2.19	2.28	2.56	2.29	2.10	1.95	2.01	2.06	2.22	2.38	2.46

North County (Zone W-2) Finances

North County (Zone W-2) is generally defined as the portion of the county north of Metcalf Road. North County (Zone W-2) accounts for approximately 80 percent of water district water consumption, but because of higher charges due to higher North County costs, about 95 percent of the Water Utility Enterprise's revenue. As shown at the beginning of the financial section in Table 4-2.1, staff recommends a $622 per acre-foot groundwater production charge for municipal and industrial (M&I) or other non-agricultural water and a $722 per acre-foot charge for contract treated water for FY 2012–13. If adopted, there would be a 9.3 percent increase for groundwater production and 7.9 percent for contract treated water compared to FY 2011–12. The average household would experience an increase in their monthly bill of $1.83 or about 6 cents a day. Customers may also experience additional charge increases enacted by their retail water provider.

Staff proposes a $0.60/AF or 3.5 percent increase to the North County agricultural groundwater production charge, which results in a $17.70 per acre-foot in FY 2012–13, in concert with the South County agricultural groundwater production charge. The resulting agricultural groundwater production charge is 3 percent of the M&I groundwater production charge in North County.

Staff recommends maintaining the surcharge on treated water delivered under the contracts with retail agencies at $100 per acre-foot. As outlined in treated water contracts, the water district has the discretion to make available treated water in excess of the retailers' basic contract amounts, so-called non-contract treated water, "… at such times and such prices as determined by the District." Staff recommends maintaining the non-contract surcharge at $50 per acre-foot for FY 2012–13. Staff anticipates having adequate surface water supplies to meet contract and non-contract deliveries. The proposed surcharges for contract and non-contract water are expected to cause retail customers to have an economic incentive to take treated water over groundwater.

It is recommended that the surface water master charge be increased from $12.17/AF to $12.60/AF in order to gradually bring revenues in line with costs related to managing, operating and billing for surface water diversions. The increases in the basic user charge and surface water master charge result in a total surface water charge for municipal and industrial water of $634.60/AF or 9.2 percent increase. The total surface water charge for agricultural water would increase to $30.30/AF, which is a 3.5 percent increase, relative to FY 2011–12.

Staff also recommends setting the State Water Project tax collection for FY 2012–13 at $19 million. The District incurs an annual indebtedness to the State of California pursuant to its Water Supply Contract dated November 20, 1961. Such indebtedness is proportional to the District's allocation of water from the State Water Project and pays for construction, maintenance and operation of state water project infrastructure and facilities. Staff anticipates that the District's contractual indebtedness to the State under the State Water Supply Contract for FY 2012–13 will be at least $19 million. Staff does not believe it is practical to raise user fees, such as groundwater production charges, to cover indebtedness. For example, if the Board approved no State Water Project tax for FY 2012–13, then it would have to increase the North County M&I groundwater production charges by $90 per acre-foot. Similarly, the Board would have to raise South County M&I groundwater production charge by $20 per acre-foot and the open space credit would need to be increased by roughly $500,000. Staff's recommendation regarding the State Water Project tax is consistent with the District's past practice and is consistent with the approach of other water districts and agencies that maintain State water supply contracts.

Table 4-6.2 shows the relationship between expenditures and the sources of revenue in North County Zone W-2. The groundwater production charges for FY 2012–13 are necessary to conduct "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this State" (District Act, Section 26.3).

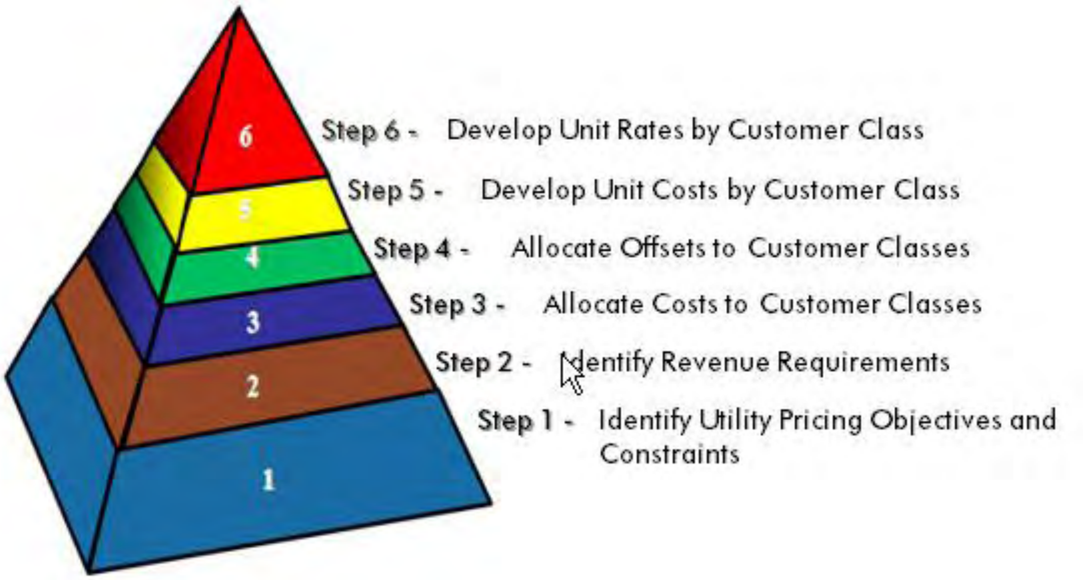
Table 4-6.2 Fiscal Year 2012–13 North County Water Utility Water Program Requirements and Financing Sources

Cost Center	Ends Policy	FY 13 Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	67,380	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	7,383	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	32,810	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.
Administration & General	Support Services	17,133	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Debt Service	15,343	Principal and Interest payments on outstanding debt
	Capital Improvements	77,765	Capital Improvement Program
	Open Space Credit	2,683	Help preserve the open space benefits provided by agricultural lands
	Operating Cost Reductions/Other Adjustments	699	Operating Cost reductions or adjustments
	Total Program Requirements	**221,195**	
	Financing Sources		
	Capital Cost recovery	3,750	
	Debt Proceeds	23,424	
	Interest & Other	9,590	
	Property Tax	20,810	
	Treated Water Sales	81,946	
	Surface Water Charges	953	
	Groundwater Production Charges	45,879	
	Capital Carryforward Reserves	35,039	
	Change in Reserves	(197)	
	Total Financing Sources	**221,195**	

Figure 4-6.3 and Table 4-6.3 show the cost of service analysis by customer class following six industry standard rate making steps:

1. Identify utility pricing objectives and constraints
2. Identify revenue requirements
3. Allocate costs to customer classes
4. Reduce costs by revenue offsets or non-rate related funding sources
5. Develop unit costs by customer class or net revenue requirements by customer class
6. Develop unit rates by customer class

Figure 4-6.3 Industry Standard Rate Making Steps


6
5
4
3
2
1
Step 6 - Develop Unit Rates by Customer Class
Step 5 - Develop Unit Costs by Customer Class
Step 4 - Allocate Offsets to Customer Classes
Step 3 - Allocate Costs to Customer Classes
Step 2 - Identify Revenue Requirements
Step 1 - Identify Utility Pricing Objectives and Constraints

Water Utility pricing objectives and constraints are identified in Resolution 99-21, the District Act, Proposition 218, and existing contracts.

Line 11 in Table 4-6.3 represents rate making steps 2 and 3 summarizing the revenue requirements for North County Zone W-2 including operations costs, capital costs and debt service. Step 2 involves allocating water utility costs between zones W-2 (North County) and W-5 (South County) according to the benefits provided in each zone. Appendix B shows the percentage of operations costs allocated to the South County, along with a brief description of the basis of the allocation. Appendix C shows the percentage of capital and debt service costs allocated to South County along with a brief description of the basis of the allocations. Costs not allocated to the South County are allocated to the North County. Step 3 involves allocating costs directly to each customer class where possible, or allocating based on volume where the program services benefit multiple customer classes.

Line 28 in Table 4-6.3 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each zone and customer class where possible, or allocated based on volume where the offset applies to multiple customer classes.

Line 38 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water (SW) and groundwater (GW) supplies conjunctively to prevent the over use or under use of the groundwater basin. First, non-rate related revenues are offset against the cost of agricultural water. This is referred to as the "open space" credit. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of treated water to groundwater and surface water users based on proportional water usage. Importing water into the county for treatment and subsequent distribution to treated water (TW) users offsets the need to pump water from the ground. Without treated imported water supplies, the groundwater basin would become over drafted. Consequently, the reallocation of treated water cost represents the value of treated water to groundwater and surface water users and facilitates a pricing structure that prevents the over use of the groundwater basin.

Table 4-6.3 Fiscal Year 2012–13 North County (Zone W2) Cost of Service by Customer Class

	FY '13 Projection ($K)		Zone W-2					
			GW		TW	SW		Total W-2
			M&I	AG	M&I	M&I	Ag	
1	**Operating Outlays**							
2	Operations/Operating Projects		28,151	239	72,518	434	10	101,351
3	SWP Imported Water Costs		5,326	47	18,330	342	8	24,053
4	Debt Service		2,571	23	12,719	29	1	15,343
5	**Total Operating Outlays**		36,048	308	103,567	805	19	140,747
6		Step 2-						
7	**Capital & Transfers**	Identify revenue						
8	Operating Transfers Out	reqmnts	-	-	-	-	-	-
9	Capital Outlays excl. carryforward		9,126	80	33,345	170	4	42,726
10	**Total Capital & Transfers**		9,126	80	33,345	170	4	42,726
11	**Total Annual Program Costs**		45,174	389	136,911	975	24	183,472
12		Step 3 - Allocate costs to customer classes						
13	**Revenue Requirement Offsets**							
14	Capital Cost Recovery		(1,460)	(13)	(2,247)	(30)	(1)	(3,750)
15	Debt Proceeds		(5,003)	(44)	(18,281)	(93)	(2)	(23,424)
16	Inter-governmental Services		(927)	(8)	(1,426)	(19)	(0)	(2,380)
17	SWP and W-1 Property Taxes		(4,285)	(38)	(13,285)	(247)	(6)	(17,860)
18	South County Deficit	Step 4-	(519)	(5)	(1,896)	(10)	(0)	(2,430)
19	Interest Earnings	Reduce costs by	(223)	(2)	(343)	(5)	(0)	(572)
20	Inter-zone Interest	revenue offsets	(2)	(0)	(3)	(0)	(0)	(5)
21	Capital Contributions		(1,104)	(10)	(1,699)	(22)	(1)	(2,836)
22	Other		(383)	(3)	(963)	(17)	(0)	(1,366)
23	Reserve Requirements		42	0	154	1	0	197
24	**Adjusted Revenue Requirement (FY 13)**		**31,311**	**267**	**96,921**	**534**	**13**	129,046
25								
26	Volume (KAF)		73.7	0.7	113.5	1.5	0.0	189
27								
28	Revenue Requirement per AF		$ 425	$ 410	$ 854	$ 356	$ 351	
29		Step 5 - Develop unit costs by customer class						
30	**Adjustments for Agricultural Preservation**							
31	Allocate WU 1% Ad Valorem Prop Tax		0	(255)	-	-	(12)	(267)
32	Transfer GF 1% Ad valorem Prop Tax		-	-	-	-	-	-
33	Transfer WS 1% Ad Valorem Prop Tax		-	-	-	-	-	-
34	Revenue Requirement per AF		$ 424.6	$ 17.7	$ 854	$ 356	$ 30.3	
35		Step 6 - Rate Design						
36	**Adjustments to Facilitate Conjunctive Use**							
37	Reallocate TW/SW/RW costs		14,556	-	(14,975)	418	-	(0)
38	Charge per AF		$ 622	$ 17.7	$ 722	$ 635	$ 30.3	
39	Total Revenue ($K)		$45,868	$12	$81,947	$952	$1	128,779

South County (Zone W-5) Finances

South County (Zone W-5) is generally defined as the portion of Santa Clara County south of Metcalf Road, including Coyote Valley, Morgan Hill, San Martin, Gilroy and other unincorporated areas within the zone. Within the Water Utility Fund, water district's staff tracks revenue and costs associated with the South County Zone W-5 separately so that the groundwater production charge for services that benefit the South County Zone can be calculated.

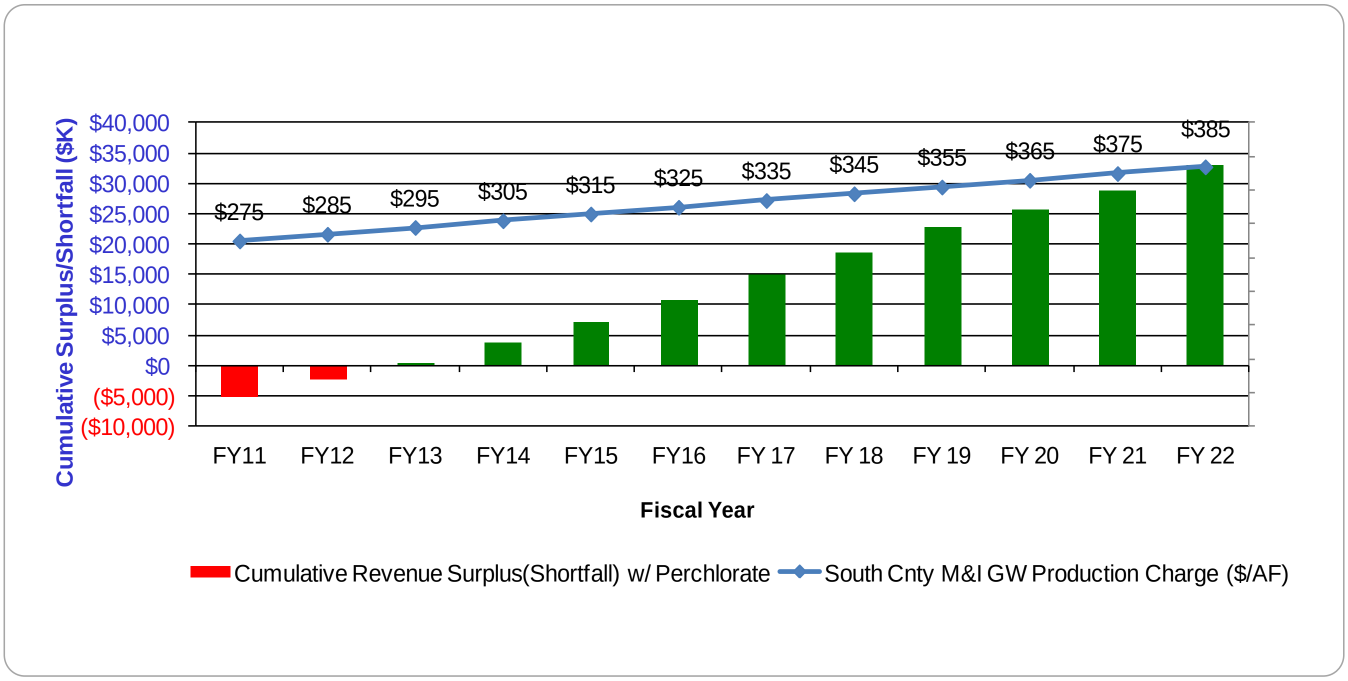
Charges in the South County (Zone W-5) are based on the costs of specific facilities, imported water costs, and operations costs related to managing a conjunctive use program, ensuring water quality, and measuring water supplies and usage. Under current policies for managing the finances of South County, charges are set to maintain an approximate balance between revenues and costs. The cumulative balance is tracked, and historically projected charges have been set to keep the cumulative balance near zero, while maintaining relative stability in South County charges. Successive years of surplus or shortfall can occur.

For South County, staff recommends increasing the groundwater production charge to $295 per acre-foot for M&I water and $17.70 per acre-foot for agricultural water. The average household would experience an increase in their monthly bill of $0.34 or about 1 cent per day. Customers may also experience additional water charge increases enacted by their retail water provider.

It is recommended that the surface water master charge be increased from $12.17/AF to $12.60/AF in order to gradually bring revenues in line with costs related to managing, operating and billing for surface water diversions. The increases in the basic user charge and surface water master results in a total surface water charge for M&I water of $307.60/AF or a 3.5 percent increase. The total surface water charge for agricultural water would increase to $30.30/AF, which is a 3.5 percent increase, relative to FY 2011–12.

On a cumulative basis, revenues are estimated to exceed costs by approximately $0.5 million at the end of FY 2012–13. Figure 4-6.4 shows the projected cumulative revenue surplus under the recommended charge projection for South County. Under this projection, cumulative revenues will exceed cumulative costs and reserve balances will build for the following nine years. The projection assumes an average increase of 3.1 percent in the M&I groundwater charge between FY 2012–13 and FY 2021–22. The average increase under the high end of the projected range shown in Figure 4-2.1 is 4.7 percent, over the same time frame.

Figure 4-6.4 **South County Cumulative Revenue Surplus / Shortfall Projection ($/Thousands)**



Open Space Credit

The District Act limits agricultural groundwater production charges to a maximum of 25 percent of the M&I groundwater production charges. Current board policy adds an "open space" credit to agricultural revenues. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low. To the extent that Proposition 218 applies to the groundwater production charge, it requires that costs to end users be proportional such that one class of users is not subsidizing another.

To comply with the current agricultural groundwater production charge setting policy, staff recommends the open space credit received by South County be $6.5 million in FY 2012–13 (funded by 1 percent ad valorem property taxes). The recommended agricultural groundwater production charge for FY 2012–13 is $17.70 per acre foot, which is 6 percent of the proposed M&I groundwater production charge in South County.

Program Requirements and Financing Sources

Table 4-6.4 shows the relationship between expenditures and sources of revenue in South County for FY 2012–13. It is estimated that South County will pay for $12.6 million of operating costs and pay back nearly $3.7 million in capital costs. The specific operating costs allocated to South County can be found in Appendix B. Details on capital cost recovery can be found in Appendix C. The groundwater production charges recommended for FY 2012–13 in South County Zone W-5 are necessary to conduct, "district activities in the protection and augmentation of the water supplies for users within a zone or zones of the district which are necessary for the public health, welfare, and safety of the people of this State" (District Act, Section 26.3).

Table 4-6.4 Fiscal Year 2012–13 South County Water Utility Program Requirements and Financing Sources

Cost Center	FY 13		
	Ends Policy	Projected ($K)	Description of Cost Center/Activities
Source of Supply	E-2.1 Current and future water supply for municipalities, industries, agriculture and the environment is reliable	7,230	This cost center contains all the anticipated expenditures that relate to obtaining, producing, and protecting a water supply; including all conservation, reclamation, and importation costs.
Raw Water Transmission & Distribution	E-2.2 Raw Water Transmission and Distribution Assets Are Managed to Ensure Efficiency and Reliability	2,030	This cost center contains all expenditures relating to the distribution of raw water. The distribution system consists of pipelines, canals, and percolation ponds and includes the use of creek systems.
Water Treatment and Treated Water Transmission & Distribution	E-2.3 Reliable High Quality Water is Delivered	90	These cost centers contain all expenditures associated with the treatment of water at the Rinconada, Penitencia and Santa Teresa Water Treatment Plants, as well as those expenditures related to the distribution of treated water to water utilities and includes costs associated with the treated water reservoirs, pumping plants, pipelines, and turnouts.
Administration & General	Support Services	3,135	This cost center contains all expenditures of an administrative nature which cannot be properly assigned to another of the other four cost centers. Work performed in this cost center cover items such as the collection of groundwater charges, financial and cash flow studies, annual reports, and general water management planning.
Capital & Other	Capital Cost Recovery	3,750	Annual payment for completed capital facilities and improvements
	Interest (Earned)/Due Utility Reserves	5	Based on cumulative revenue shortfall at 3% interest rate
	Operating Cost Reductions /Other Adjustments	87	Operating Cost reductions or adjustments
	Total Program Requirements	**16,328**	
	Financing Sources		
	Open Space Credit	6,504	
	Property Tax & Other Revenue	2,192	
	Surface Water Charges	193	
	Recycled Water Charges	281	
	Groundwater Production Charges	9,588	
	Total Financing Sources	**18,758**	
	FY 13 Revenue Surplus	**2,430**	

Figure 4-6.3 and Table 4-6.5 show the cost of service analysis by customer class following the six industry standard rate making steps for South County Zone W-5:

1. Identify utility pricing objectives and constraints
2. Identify revenue requirements
3. Allocate costs to customer classes
4. Reduce costs by revenue offsets or non-rate related funding sources
5. Develop unit costs by customer class or net revenue requirements by customer class
6. Develop unit rates by customer class

Line 11 in Table 4-6.5 represents rate making steps 2 and 3 summarizing the revenue requirements for South County Zone W-5. Costs have been allocated directly to each customer class where possible, or allocated based on volume where the costs benefit multiple customer classes.

Line 28 in Table 4-6.5 represents rate making steps 4 and 5. It reflects the unit cost per acre-foot by customer class after applying non-rate related offsets to the revenue requirements. Offsets have been allocated directly to each customer class where possible, or allocated based on volume where the offset applies to multiple customer classes.

Line 38 represents rate making step 6. There are two adjustments that have been made to achieve a pricing structure that meets the objectives of Resolution 99-21, namely a structure that facilitates managing surface water and groundwater supplies conjunctively to prevent the over use or under use of the groundwater basin. First, non-rate related revenues are offset against the cost of agricultural water. This is referred to as the “open space” credit. The purpose of the credit is to preserve the open space benefits provided by agricultural lands by keeping agricultural groundwater production charges low.

The second adjustment involves reallocating the cost of recycled water (RW) to groundwater users. Without recycled water supplies, there would be additional demand on the groundwater basin and a higher risk of overdraft. Consequently, the reallocation of recycled water cost represents the value of recycled water to groundwater users and facilitates a pricing structure that helps prevent the over use of the groundwater basin.

Table 4-6.5 Fiscal Year 2012–13 South County (Zone W5) Cost of Service by Customer Class

	FY '13 Projection ($K)	Zone W-5						
		GW		SW		RW		Total W-5
		M&I	AG	M&I	AG	M&I	AG	
1	**Operating Outlays**							
2	Operations/Operating Projects	6,779	5,255	124	315	53	47	12,572
3	SWP Imported Water Costs	-	-	-	-	-	-	-
4	Debt Service	-	-	-	-	-	-	-
5	**Total Operating Outlays**	6,779	5,255	124	315	53	47	12,572
6	Step 2- Identify revenue reqmnts							
7	**Capital & Transfers**							
8	Operating Transfers Out	-	-	-	-	-	-	-
9	Capital Outlays excl. carryforward	-	-	-	-	-	-	-
10	**Total Capital & Transfers**	-	-	-	-	-	-	-
11	**Total Annual Program Costs**	6,779	5,255	124	315	53	47	12,572
12	Step 3 - Allocate costs to customer classes							
13	**Revenue Requirement Offsets**							
14	Capital Cost Recovery	1,188	958	19	50	813	723	3,750
15	Debt Proceeds	-	-	-	-	-	-	-
16	Inter-governmental Services	(117)	(94)	(1)	(3)	-	-	(215)
17	SWP and W-1 Property Taxes	(594)	(479)	(10)	(25)	(17)	(15)	(1,140)
18	South County Deficit Step 4- Reduce costs by revenue offsets	1,266	1,021	20	53	37	33	2,430
19	Interest Earnings	-	-	-	-	-	-	-
20	Inter-zone Interest	3	2	0	0	0	0	5
21	Capital Contributions	-	-	-	-	-	-	-
22	Other	(16)	(13)	(0)	(1)	-	-	(30)
23	Reserve Requirements	-	-	-	-	-	-	-
24	**Adjusted Revenue Requirement (FY 13)**	**8,509**	**6,650**	**153**	**390**	**885**	**787**	17,373
25								
26	Volume (KAF)	31.0	25.0	0.5	1.3	0.9	0.8	60
27								
28	Revenue Requirement per AF	$ 274	$ 266	$ 305	$ 300	$ 983	$ 983	
29	Step 5 - Develop unit costs by customer class							
30	**Adjustments for Agricultural Preservation**							
31	Allocate WU 1% Ad Valorem Prop Tax	-	(3,490)	-	-	-	-	(3,490)
32	Transfer GF 1% Ad valorem Prop Tax	-	(1,910)	-	-	-	-	(1,910)
33	Transfer WS 1% Ad Valorem Prop Tax	-	(807)	-	(350)	-	(754)	(1,911)
34	Revenue Requirement per AF	$ 274	$ 17.7	$ 305	$ 30.3	$ 983	$ 41.5	
35	Step 6 - Rate Design							
36	**Adjustments to Facilitate Conjunctive Use**							
37	Reallocate TW/SW/RW costs	636	-	1	-	(638)	-	-
38	Charge per AF	$ 295	$ 17.7	$ 308	$ 30	$ 275	$ 41.5	
39	Total Revenue ($K)	$9,145	$443	$154	$39	$248	$33	10,061

APPENDIX A

WATER UTILITY CHARGE COMPONENTS AND RECOMMENDED CHARGES

Table A-1 Recommended Charge Components for Fiscal Year 2012–13

Component	Charge ($/AF)
Basic User, Zone W-2 (North County)	
Agricultural	17.70
M&I	622.00
Basic User, Zone W-5 (South County/Coyote Valley)	
Agricultural	17.70
M&I	295.00
Treated Water Surcharge	
Contract	100.00
Non-contract	50.00
Surface Water Charge	
Water Master	12.60

Table A-2 Recommended Charge Components for Fiscal Year 2012–13

Type of Charge	AG Water ($/AF)	M&I Water ($/AF)
Groundwater Production		
Zone W-2	$17.70	$622.00
Zone W-5	$17.70	$295.00
Surface Water[1]		
Other Zone W-5 Deliveries[2]	$30.30	$307.60
Other Zone W-2 Deliveries[3]	$30.30	$634.60
Minimum Charge Zone W-5[4]	$13.28	$221.25
Minimum Charge Zone W-2[5]	$13.28	$466.50
Treated Water		
Contract[6]	N/A	$722.00
Non-contract[7]	N/A	$672.00
Recycled Water		
Gilroy	$41.50	$275.00

[1] Surface water charge is the sum of the basic user charge plus the water master charge. It also includes the capital cost and power, wherever applicable.

[2] Other Zone W-5 Deliveries = Basic User (AG or M&I @ $17.70/AF or $295.00/AF) + Water Master ($12.60/AF).

[3] Other Zone W-2 Deliveries = Basic User (AG or M&I @ $17.70/AF or $622.00/AF) + Water Master ($12.60/AF).

[4] Minimum Charge W-5 = 0.75 X Basic User W-5 (M&I @ $295.00/AF, AG @ $17.70/AF).

[5] Minimum Charge W-2 = 0.75 X Basic User W-2 (M&I @ $622.00/AF, AG @ $17.70/AF).

[6] Treated Water Charge is the sum of Basic User ($622.00/AF) and Treated Water Surcharge ($100.00/AF).

[7] The charge for non-contract deliveries is the sum of the basic user charge ($622.00/AF) and the treated water surcharge for non-contract water ($50.00/AF).

APPENDIX B

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $)

Cost Center	Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2013	Basis of Allocation
Source of Supply	91041002	Water Supply Strategy Development	11.1%	6	44	50	M&I Water Usage Ratio
	91041011	Bay Area Water Supply Coordin	0.0%	-	-	-	No South County Benefit
	91041012	Water Operations Planning	14.8%	49	284	334	Raw Water Deliveries
	91041014	Urban Water Management Plan	11.1%	12	97	110	M&I Water Usage Ratio
	91041018	Groundwater Management Protocols	36.8%	99	170	269	Groundwater Production Ratio
	91042008	Infrstr Reliability Program	11.1%	24	193	217	M&I Water Usage Ratio
	91061001	Env Planning and Compliance	18.3%	187	836	1,023	Estimated Labor
	91061005	Water Supply Accounting	14.8%	30	174	204	Raw Water Deliveries
	91061012	Environmental Compliance Sup	14.8%	5	26	30	Raw Water Deliveries
	91081007	Dam Safety Program	14.2%	184	1,111	1,295	Program Benefit Calculation
	91101004	Water Recycling - General	5.9%	120	1,915	2,035	Population
	91111001	Water Rights	23.7%	40	129	169	Water Rights Volume
	91131004	Imported Water Program	10.6%	468	3,947	4,415	Imported Water Ratio
	91131006	IW San Felipe Division Delvrs	13.1%	2,470	16,385	18,855	Program Benefit Calculation
	91131007	IW South Bay Aqueduct Delvrs	0.0%	-	673	673	No South County Benefit
	91131008	State Water Project Costs	0.0%	-	23,381	23,381	No South County Benefit
	91151001	Water Conservation-Prog Support	5.9%	35	555	590	Population
	91151007	Water Conservation-Residential	5.3%	99	1,775	1,874	Program Benefit Calculation
	91151008	Water Conservation-Commercial/Ind	4.5%	66	1,405	1,472	Program Benefit Calculation
	91151009	Water Conservation-AG	84.3%	278	52	329	Labor hours
	91151010	Water Conservation-Landscape	6.9%	84	1,129	1,213	Program Benefit Calculation
	91152007	Water Conservation Campaign	5.9%	13	206	219	Population
	91181007	AWT Facility Operations	0.0%	-	2,893	2,893	No South County Benefit
	91181008	AWT Facility Maintenance	0.0%	-	61	61	No South County Benefit
	91182002	Integrate AWT with supplies	0.0%	-	827	827	No South County Benefit
	91211004	San Felipe Reach 1 Operation	17.0%	75	368	443	CVP Imported Water Ratio
	91211084	San Felipe Reach1 Ctrl and Ele	17.0%	54	263	316	CVP Imported Water Ratio
	91211085	SF Reach 1-Engineering - Other	17.0%	22	105	127	CVP Imported Water Ratio
	91211099	San Felipe Reach 1 Gen Maint	17.0%	186	907	1,093	CVP Imported Water Ratio
	91221002	San Felipe Reach 2 Operation	17.0%	8	38	46	CVP Imported Water Ratio
	91221006	SF Reach 2-Engineering - Other	17.0%	28	134	162	CVP Imported Water Ratio
	91221099	San Felipe Reach 2 Gen Maint	17.0%	21	101	121	CVP Imported Water Ratio
	91231002	San Felipe Reach 3 Operation	8.5%	15	166	181	CVP Imported Water Ratio adjusted for Coyote PP
	91231084	San Felipe Reach3 Ctrl and Ele	8.5%	21	230	251	CVP Imported Water Ratio adjusted for Coyote PP
	91231085	SF Reach 3-Engineering - Other	8.5%	6	69	76	CVP Imported Water Ratio adjusted for Coyote PP
	91231099	San Felipe Reach 3 Gen Maint	12.8%	83	569	653	CVP Imported Water Ratio adjusted for Coyote PP
	91441003	Desalination	11.1%	16	129	145	M&I Water Usage Ratio
	91451002	Well Ordinance Program	11.8%	143	1,067	1,209	Well Permits and Inspections
	91451005	Source Water Quality Mgmt	11.1%	48	387	435	M&I Water Usage Ratio
	91451011	Invasive Mussel Prevention	14.8%	95	548	643	Raw Water Deliveries
	91452042	Salt and Nutrient Mgmt Plan	36.8%	75	129	204	Groundwater Production Ratio
	91551001	Groundwater Monitoring	36.8%	354	609	963	Groundwater Production Ratio
	91551002	Groundwater Supply Managemen	36.8%	363	623	985	Groundwater Production Ratio
	91742041	Comprehensive Habitat Cons P	18.6%	41	178	218	Program Benefit Calculation
	91761001	Local Res / Div Plan & Analysis	19.6%	107	438	545	Total Water Deliveries Ratio
	91761002	Local Reservoir/Diversion Ops	19.6%	34	138	172	Total Water Deliveries Ratio
	91761099	Dams / Reservoir Gen Maint	21.7%	324	1,170	1,495	Program Benefit Calculation
	91791012	Groundwater Quality Manageme	36.8%	435	747	1,182	Groundwater Production Ratio
	91792001	S County Water Quality Testing	100.0%	408	-	408	Benefits Only South County
				7,230	**67,380**	**74,610**	

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $) ... CONTINUED

Cost Center	Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2013	Basis of Allocation
Raw Water Transmission & Distribution	92041014	FAHCE/Three Creeks HCP Project	4.3%	88	1,968	2,056	Coyote Water Supply Ratio
	92061012	Environmental Compliance Sup	14.8%	8	48	56	Raw Water Deliveries
	92261099	Vasona Pump Station Gen Main	0.0%	-	86	86	No South County Benefit
	92761001	Raw Water T and D Genrl Oper	14.8%	158	908	1,065	Raw Water Deliveries
	92761006	Rchrg / RW Field Fac Asset Mgt	36.0%	69	123	192	Groundwater Recharge Ratio
	92761007	Rchrg / RW Field Ops Plan& Analysis	36.0%	76	136	212	Groundwater Recharge Ratio
	92761008	Recycled Water T&D Genrl Maint	100.0%	66	-	66	Benefits Only South County
	92761009	Recharge/RW Field Ops	36.0%	777	1,380	2,157	Groundwater Recharge Ratio
	92761010	Rchrg / RW Field Fac Maint	36.0%	412	732	1,144	Groundwater Recharge Ratio
	92761011	Untreated Water Field Operations	39.7%	16	24	40	Untreated Water Deliveries Ratio
	92761012	Untreated Water Prog Plan&Analysis	39.7%	12	18	29	Untreated Water Deliveries Ratio
	92761082	Raw Water T&D Ctrl and Electr	14.8%	96	555	651	Raw Water Deliveries
	92761083	Raw Water T&D Eng Other	14.8%	18	105	124	Raw Water Deliveries
	92761085	Anderson Hydrelctrc Fclty Main	19.6%	20	84	105	Anderson Water Deliverises Ratio
	92761086	Anderson Hydrelctrc Faclty Ops	19.6%	8	33	41	Anderson Water Deliverises Ratio
	92761099	Raw Water T / D Gen Maint	14.8%	152	874	1,026	Raw Water Deliveries
	92781002	RW Corrosion Control	14.8%	54	309	363	Raw Water Deliveries
				2,030	**7,383**	**9,413**	
Water Treatment and Treated Water Transmission & Distribution	93061012	Environmental Compliance Sup	0.0%	-	360	360	No South County Benefit
	93081008	W T General Water Quality	0.0%	-	1,420	1,420	No South County Benefit
	93081009	Water Treatment Plant Engineering	0.0%	-	479	479	No South County Benefit
	93231007	PWTP Landslide Monitoring	0.0%	-	142	142	No South County Benefit
	93231009	PWTP General Operations	0.0%	-	4,072	4,072	No South County Benefit
	93231099	Penitencia WTP General Maint	0.0%	-	2,230	2,230	No South County Benefit
	93281005	STWTP - General Operations	0.0%	-	4,804	4,804	No South County Benefit
	93281099	Santa Teresa WTP General Maint	0.0%	-	2,444	2,444	No South County Benefit
	93291012	RWTP General Operations	0.0%	-	6,504	6,504	No South County Benefit
	93291099	Rinconada WTP General Maint	0.0%	-	3,508	3,508	No South County Benefit
	93401002	Water District Laboratory	0.8%	26	3,290	3,316	Lab Analyses
	93761001	SF/SCVWD Intertie General Ops	0.0%	-	105	105	No South County Benefit
	93761004	Campbell Well Field Operations	0.0%	-	76	76	No South County Benefit
	93761005	Campbell Well Field Maintenance	0.0%	-	23	23	No South County Benefit
	93761006	Treated Water Ctrl & Elec Eng	0.0%	-	1,750	1,750	No South County Benefit
	93761099	SF/SCVWD Intertie Gen Maint	0.0%	-	39	39	No South County Benefit
	94761005	TW T&D - Engineering - Other	0.0%	-	162	162	No South County Benefit
	94761099	Treated Water T/D Gen Maint	0.0%	-	657	657	No South County Benefit
	94762007	SCADA Systems Upgrades	14.8%	64	367	430	Raw Water Deliveries
	94781001	Treated Water T/D Corrosion	0.0%	-	380	380	No South County Benefit
				90	**32,810**	**32,900**	

BASIS OF COST ALLOCATIONS BETWEEN NORTH AND SOUTH ZONES (IN THOUSANDS $) ... CONTINUED

Cost Center	Project #	Project Name	South County Allocation	South County Share	North County Share	Total FY 2013	Basis of Allocation
Administration & General	95001090	Unscoped Projects-Budget Only	11.1%	51	407	458	M&I Water Usage Ratio
	95001091	Excess Available Hours-Fd 61	11.1%	14	115	129	M&I Water Usage Ratio
	95011003	WU Asset Protection Support	20.0%	88	354	442	Program Benefit Calculation
	95021008	Electrical Power Support	1.5%	5	296	301	Labor hours
	95021009	Pipeline Monumentation	11.1%	18	140	158	M&I Water Usage Ratio
	95031002	Grants Management	11.1%	10	81	91	M&I Water Usage Ratio
	95041025	SMP Biodiversity Monitoring	11.1%	1	9	10	M&I Water Usage Ratio
	95041039	Integrated Regional Water Mgmt	11.1%	13	101	113	M&I Water Usage Ratio
	95041042	Llagas Fire Mgmt	100.0%	114	-	114	Benefits Only South County
	95041046	LSMU Doc Management System	11.1%	4	30	33	M&I Water Usage Ratio
	95042037	Safe, Clean Water and Natural Flood Protection	11.1%	21	166	187	M&I Water Usage Ratio
	95061007	WUE Asset Management Planning Prg	1.4%	7	462	468	Program Benefit Calculation
	95061012	Rental Expense San Pedro,MH	100.0%	26	-	26	Benefits Only South County
	95061027	Water Utility Health & Safety	11.1%	33	263	296	M&I Water Usage Ratio
	95061032	Water Utility Ops Safety Training	11.1%	48	383	431	M&I Water Usage Ratio
	95061037	WUE Training & Development	11.1%	67	536	603	M&I Water Usage Ratio
	95061038	WUE Administration	11.1%	665	5,326	5,990	M&I Water Usage Ratio
	95061041	WU As-Built Drawing Control	11.1%	28	227	255	M&I Water Usage Ratio
	95061045	District Asset Mgmt Framework	11.1%	46	365	411	M&I Water Usage Ratio
	95061046	District CMMS Administration	11.1%	49	390	439	M&I Water Usage Ratio
	95061052	Vacancy Pool Salary& Benefits	11.1%	176	1,412	1,588	M&I Water Usage Ratio
	95062012	WUE Maint Audit Impl Plan	1.4%	3	208	211	Program Benefit Calculation
	95071041	Welding Services	1.4%	5	342	347	Program Benefit Calculation
	95101003	W2 W5 Water Revenue Program	69.0%	717	322	1,039	Labor hours
	95111003	Water Use Measurement	35.0%	466	865	1,331	Labor hours
	95121001	Fin/Economic Water Rate Stud	11.1%	46	372	418	M&I Water Usage Ratio
	95151002	Water Utility Customer Relations	5.9%	16	251	267	Population
	95731001	Water Supply Modeling/Analys	11.1%	48	385	433	M&I Water Usage Ratio
	95741001	WUE Long-term Planning	11.1%	58	468	527	M&I Water Usage Ratio
	95761003	SCADA Network Administration	1.9%	3	132	134	Program Benefit Calculation
	95761071	Emergency Preparedness Prog	5.9%	59	943	1,002	Population
	95761072	Business Continuity Program	5.9%	18	291	310	Population
	95771011	District Urban Runoff Program	14.8%	10	59	69	Raw Water Deliveries
	95771031	HAZMAT Emergency Response	9.1%	2	19	21	Emergency Response events
	95811043	Hydrologic Data Msrmt & Mgmt	16.6%	140	701	841	Stream Gauge location
	95811046	Warehouse Services	11.1%	52	412	464	M&I Water Usage Ratio
	95811049	X Valley Level / Benchmark	4.7%	10	208	219	Program Benefit Calculation
	95811054	District Real Property Administration	0.5%	0	93	93	Program Benefit Calculation
				3,135	**17,133**	**20,268**	
Other		Adjustments (Assumed Net Reduction)	11.1%	87	699	786	M&I Water Usage Ratio
				87	**699**	**786**	
		TOTAL		12,572	125,404	137,976	

Note: Projects 91231002, 91231084, 912341085, and 91231099 have been adjusted for the Coyote Pumping Plant costs.

APPENDIX C
SOUTH COUNTY CAPITAL COST RECOVERY

(In Thousands $)

Job Description	Total Project Cost	South County %	South County Cost	FY 13 Cost Recovery*	Year Cost Recovery is Complete	Basis of Allocation to the South
Uvas Reservoir Valves Replace	$ 303	100.0%	$ 303	$ 25	FY 14	Benefits only South County
Madrone Pipeline Replace	$ 389	100.0%	$ 389	$ 31	FY 14	Benefits only South County
Uvas Dam & Reservoir	$ 1,124	100.0%	$ 1,124	$ 88	FY 22	Benefits only South County
San Pedro Recharge Facility	$ 1,882	100.0%	$ 1,882	$ 147	FY 22	Benefits only South County
San Pedro Recharge house	$ 700	100.0%	$ 700	$ 47	FY 31	Benefits only South County
Recycled Water Improvements I	$ 7,232	100.0%	$ 7,232	$ 481	FY 32	Benefits only South County
Recycled Water Improvements II	$ 118	100.0%	$ 118	$ 8	FY 33	Benefits only South County
Recycled Water Improvements III	$ 1,721	100.0%	$ 1,721	$ 115	FY 34	Benefits only South County
Water Banking Rights	$ 6,226	8.0%	$ 498	$ 33	FY 35	Total Imported Water Ratio
Dam Instrumentation	$ 6,343	21.0%	$ 1,332	$ 88	FY 41	Program benefit calculation
Geodetic Control Maintenance	$ 236	41.0%	$ 97	$ 6	FY 36	Survey Analysis
SC Recycled Water Masterplan - Immediate Term	$ 3,257	100.0%	$ 3,257	$ 216	FY 37	Benefits only South County
SC Recycled Water Masterplan - Short Term Implementation 1A	$ 10,793	100.0%	$ 10,793	$ 716	FY 42	Benefits only South County
Water Banking FY 06	$ 18,895	9.0%	$ 1,701	$ 113	FY 36	Total Imported Water Ratio
San Felipe Division Capital	$ 7,389	10.6%	$ 783	$ 783	N/A	Repayment Cost Distribution
Pacheco Pumping Plant Regulating Tank Recoating	$ 3,393	17.0%	$ 577	$ 38	FY 42	CVP Imported Water Ratio
San Felipe Communications Cable Replacement	$ 968	17.0%	$ 165	$ 11	FY 42	CVP Imported Water Ratio
Small Caps, San Felipe	$ 1,002	17.0%	$ 133	$ 133	N/A	CVP Imported Water Ratio
Santa Clara Tunnel Landslide	$ 4,509	15.1%	$ 681	$ 45	FY 39	CVP Imported Water Ratio
SC Tunnel Landslide Mitigation	$ 313	16.9%	$ 53	$ 4	FY 39	CVP Imported Water Ratio
Small Caps, San Felipe Reach 3	$ 1,266	17.0%	$ 215	$ 215	N/A	CVP Imported Water Ratio
Water Infrastructure Reliability Program	$ 2,134	1.5%	$ 32	$ 2	FY 36	Program benefit calculation
Water Infrastructure Baseline Improvement	$ 2,403	3.6%	$ 87	$ 6	FY 38	Spare pipe usage
Coyote Dam Control Building Improvement	$ 617	19.6%	$ 121	$ 8	FY 42	Anderson deliveries ratio
Raw Water Control System	$ 9,188	4.3%	$ 399	$ 26	FY 37	Program benefit calculation
Small Caps, Raw Water	$ 696	14.8%	$ 103	$ 103	N/A	Raw Water Usage
Pipeline Hydraulic Reliability Upgrades	$ 307	1.9%	$ 6	$ 0	FY 42	Program benefit calculation
Information Systems Management	$ 5,802	9.8%	$ 569	$ 38	FY 40	M&I Water Usage Ratio
Peoplesoft Upgrade	$ 78	9.8%	$ 8	$ 1	FY 39	M&I Water Usage Ratio
Corp Yard Relocation	$ 26	10.2%	$ 3	$ 0	FY 40	M&I Water Usage Ratio
Capital Program Administration	$ 2,921	7.6%	$ 223	$ 223	N/A	Total Capital Cost Ratio
Grand Total	$ 102,229		$ 35,302	$ 3,750		

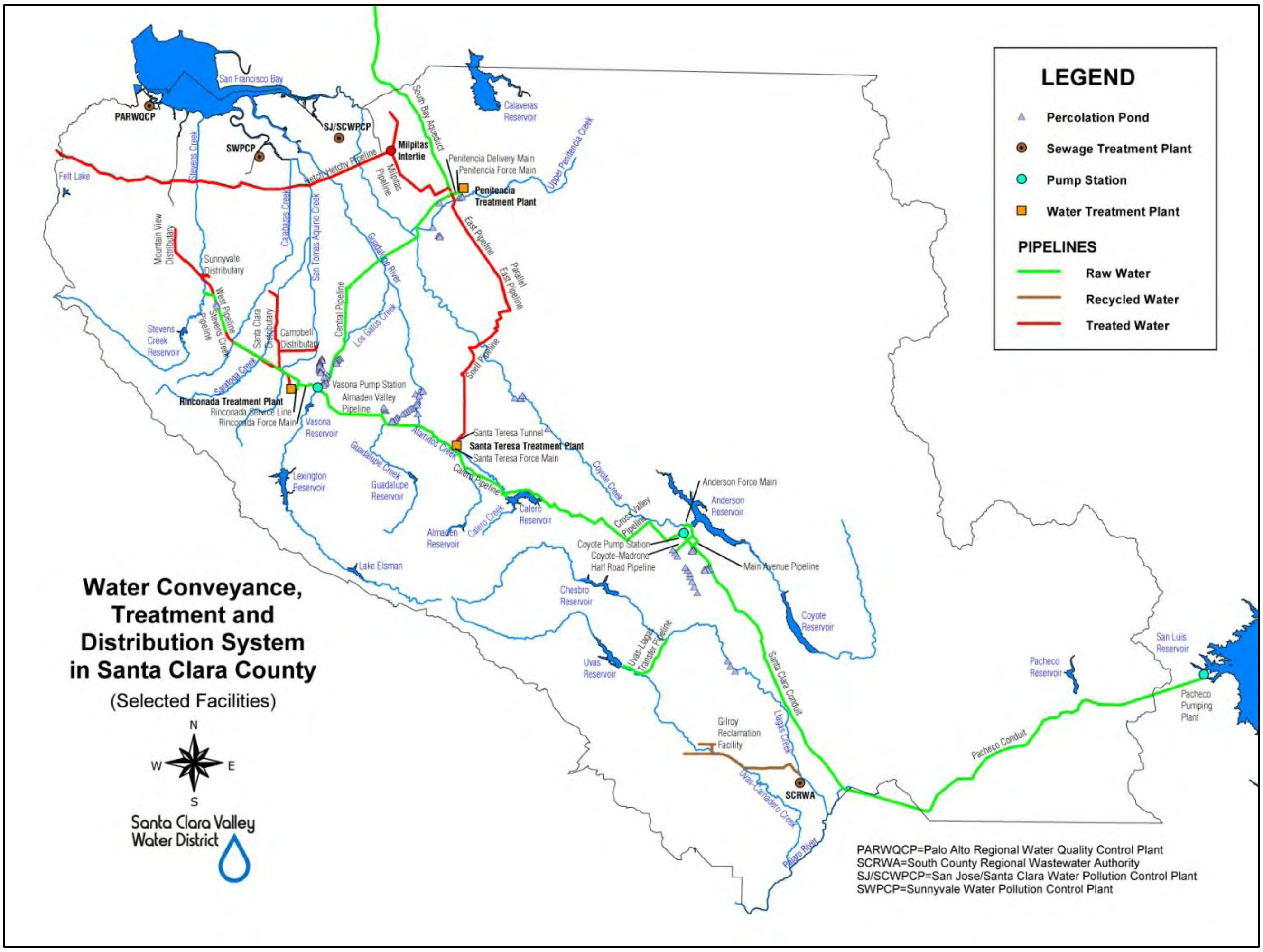
* Capital projects that benefit South County are paid for over the life of the project (typically 30 years) beginning when the project is completed

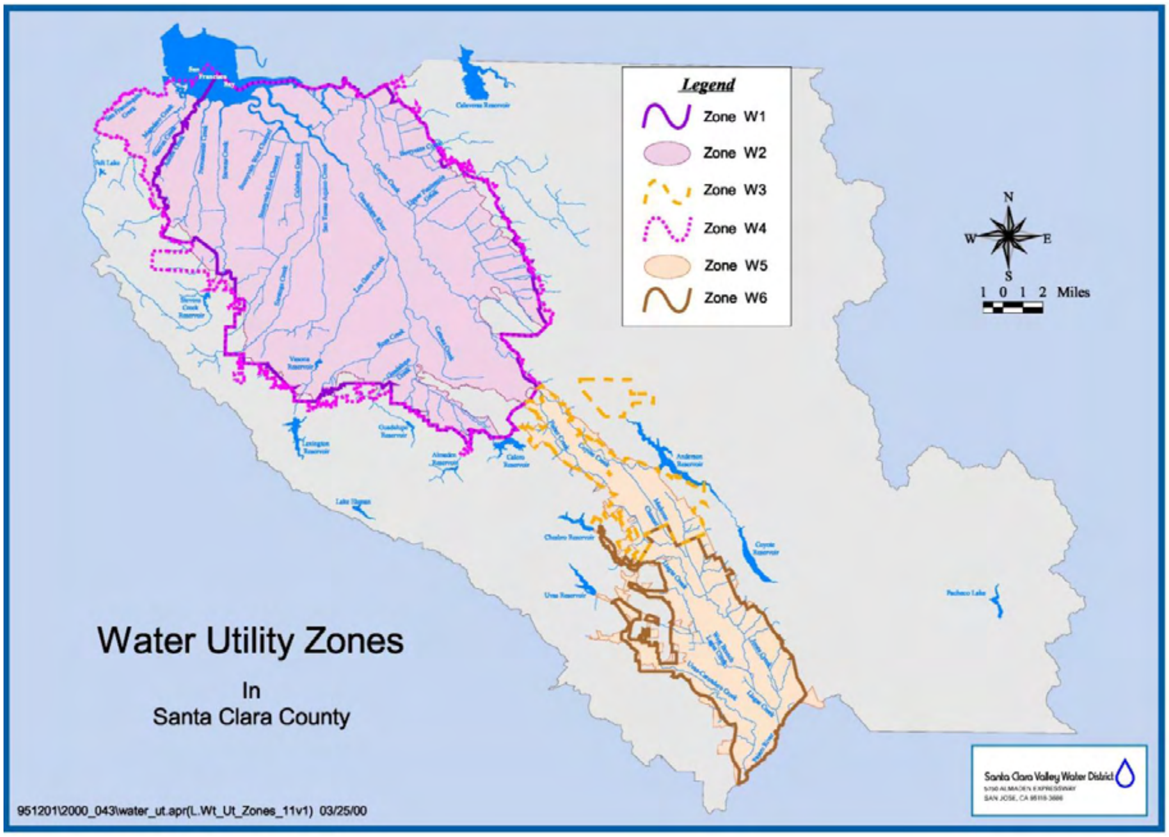
APPENDIX D
ACRONYMS

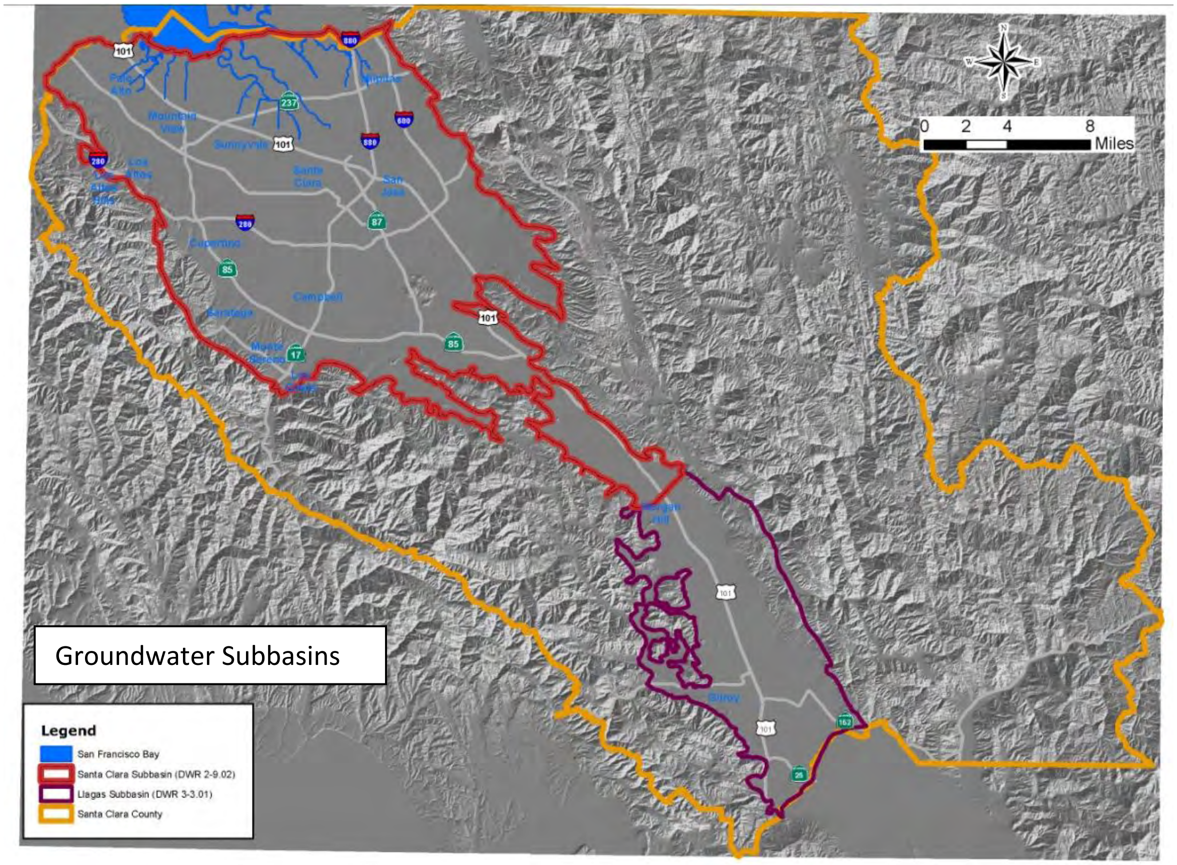
ABAG	Association of Bay Area Governments
AF	Acre Feet
AG	Agriculture
BDCP	Bay Delta Conservation Plan
board	Board of Directors
CALPERS	California Public Employees Retirement System
CESA	California Endangered Species Act
CIP	Capital Improvement Project
CVP	Central Valley Project
DHCCP	Delta Habitat Conservation and Conveyance Program
DWR	Department of Water Resources
ESA	Endangered Species Act
FAHCE	Fisheries and Aquatic Habitat Collaborative Effort
FWS	Fish and Wildlife Service
FY	Fiscal Year
GW	Groundwater
Llagas Subbasin	Groundwater Subbasin as defined by DWR bulletin 118-2003 and as shown in map of Groundwater Subbasins, area south of Cochrane Road
M&I	Municipal and Industrial
NMFA	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
North County	Northern Santa Clara County, north of Metcalf Road
RFC	Raftelis Financial Consultants, Inc.
RFP	Request for Proposal
RW	Recycled Water
SFPUC	San Francisco Public Utilities Commission
SJWC	San Jose Water Company
SWP	State Water Project
SW	Surface Water
Santa Clara Subbasin	Groundwater Subbasin as defined by DWR bulletin 118-2003 and as shown in map of Groundwater Subbasins, area north of Cochrane Road and includes Coyote Valley
South County	Southern Santa Clara County, south of Metcalf Road
Three Creeks HCP	Three Creeks Habitat Conservation Plan
TW	Treated Water
USBR	United States Bureau of Reclamation
UWMP	Urban Water Management Plan
Valley HP	Santa Clara Valley Habitat Plan
Zone W-2	Charge zone W-2, as defined by zone boundary in map of Water Utility Zones
Zone W-5	Charge zone W-5, as defined by zone boundary in map of Water Utility Zones
water district	Santa Clara Valley Water District

APPENDIX E

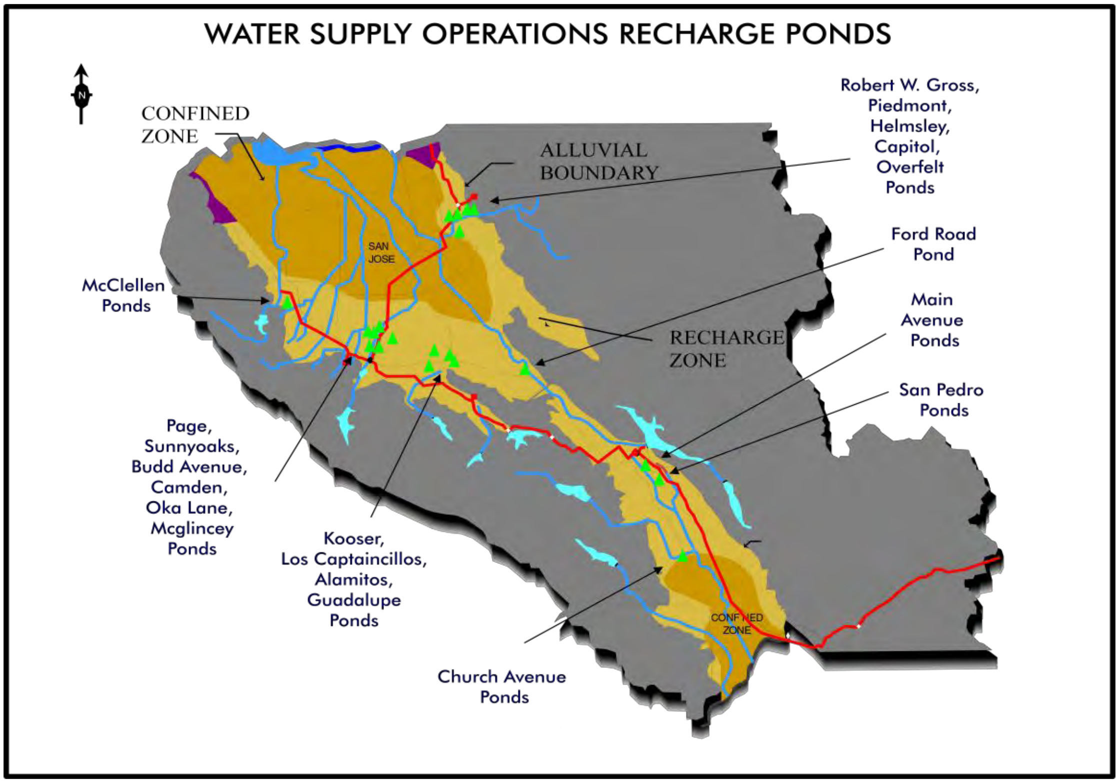
MAPS




Legend
Zone W1
Zone W2
Zone W3
Zone W4
Zone W5
Zone W6
N
W
E
S
1 0 1 2 Miles
Water Utility Zones
In
Santa Clara County
Santa Clara Valley Water District
5750 ALMADEN EXPRESSWAY
SAN JOSE, CA 95118-3686
951201\2000_043\water_ut.apr(L.Wt_Ut_Zones_11v1) 03/25/00

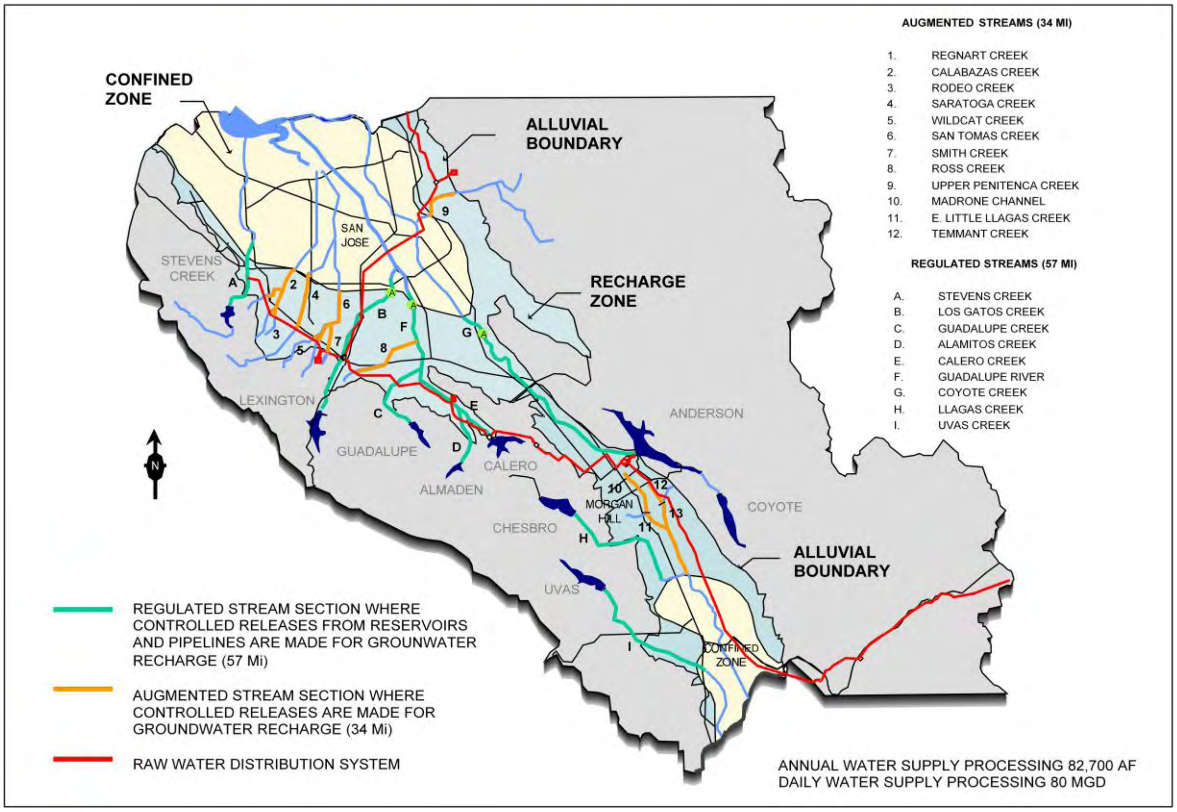

Groundwater Subbasins
Legend
San Francisco Bay
Santa Clara Subbasin (DWR 2-9.02)
Llagas Subbasin (DWR 3-3.01)
Santa Clara County
0 2 4 8
Miles
N
W
E
S
Palo Alto
Mountain View
Sunnyvale
Milpitas
Los Altos
Los Altos Hills
Santa Clara
San Jose
Cupertino
Campbell
Saratoga
Monte Sereno
Los Gatos
Morgan Hill
Gilroy
101
880
237
280
87
85
17
152
25

WATER SUPPLY OPERATIONS RECHARGE PONDS


CONFINED ZONE
ALLUVIAL BOUNDARY
Robert W. Gross, Piedmont, Helmsley, Capitol, Overfelt Ponds
Ford Road Pond
SAN JOSE
McClellen Ponds
RECHARGE ZONE
Main Avenue Ponds
San Pedro Ponds
Page, Sunnyoaks, Budd Avenue, Camden, Oka Lane, Mcglincey Ponds
Kooser, Los Captaincillos, Alamitos, Guadalupe Ponds
CONFINED ZONE
Church Avenue Ponds
N

Water Supply Operations In-Stream Recharge

91 MILES OF REGULATED AND UNREGULATED AUGMENTED STREAMS WHERE FLOW IS MANAGED BY WATER SUPPLY FOR INSTREAM GROUNDWATER RECHARGE



Santa Clara Valley
Water District

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